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Town of Ross General Plan

Adopted
March, 1988

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TOWN OF ROSS
GENERAL PLAN

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INTRODUCTION

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BACKGROUND

Like all cities and counties in California, the Town of Ross is required to prepare and adopt a general plan. The California Government Code, in fact, defines rather specifically the purpose and content of general plans. However, even if it were not required, a plan for the Town simply makes good sense.

A plan is necessary to define the goals of the residents of Ross regarding the place where they live. A plan is also necessary to identify the unique natural resources of the Town and surrounding area and to assure that these features are protected and enhanced. Additionally, a plan is necessary to assure that the amount and location of existing and future development is consistent with maintaining high levels of public services.

The Town's previous General Plan was adopted in 1974. The reasons for updating the existing General Plan are as follows: (1) to respond to any changed conditions since ; (2) to consolidate existing policies and available information; (3) to respond to the detailed requirements of state law concerning General Plan content, many of which have changed since 1974; (4) to provide a concise statement of community goals and policies concerning important issues; (5) to establish a comprehensive basis for zoning and other specific techniques, programs and actions that are intended to implement the General Plan; and (6) to address current and possible future planning issues affecting the community, such as potential change in use of the Ross General Hospital site, existing and future traffic conditions, possible future changes in zoning designations and standards, health and safety concerns (such as geology, noise and flooding), and coordination with neighboring communities and entities in land use planning.

STATE LAW REQUIREMENTS FOR GENERAL PLANS

State law requires that a general plan be an integrated, internally consistent document that includes extensive background data supporting the proposed objectives, policies, standards and actions of the plan. Subject areas that must be covered are land use, circulation, housing, safety, open space, conservation and noise. Specifically, Government Code §65300, §65300.5 and §65302 state:

> Each planning agency shall prepare and the legislative body of each county and city shall adopt a comprehensive, long-term general plan for the physical development of the county or city, and of any land outside its boundaries which in the planning agency's judgement bears relation to its planning. Chartered cities shall adopt general plans which contain the mandatory elements specified in Section 65302.
>
> In construing the provisions of this article, the Legislature intends that the general plan and elements and parts thereof comprise an integrated, internally consistent and compatible statement of policies for the adopting agency.
>
> The general plan shall consist of a statement of development policies and shall include a diagram or diagrams and text setting forth objectives, principles, standards, and plan proposals. The plan shall include the following elements:
>
> (a) A land use element . . . .
> (b) A circulation element . . . .
> (c) A housing element . . . .
> (d) A conservation element . . . .
> (e) An open space element . . . .
> (f) A noise element . . . .
> (g) A safety element . . . .

However, in many ways, the Town of Ross is unique when compared to other cities. The natural setting, overall low density of development, minimal build-out potential and small size of the community (estimated to be 2,748 residents and 962 housing units as of January, 1987) are qualities and characteristics that should

control the content and scope of the General Plan. In §65302.1 state law deals with the matter of general plan content necessary to reflect and accommodate local conditions and circumstances, stating:

> The general plan shall address each of the elements specified in Section 65302 to the extent that the subject of the element exists in the planning area. The degree of specificity and level of detail of the discussion of each such element shall reflect local conditions and circumstances. . .

To assist local governments in meeting these responsibilities, Government Code §65040.2 directs the Office of Planning and Research (OPR) to adopt and periodically revise guidelines for the preparation and content of local general plans. The Guidelines are advisory only. Yet, as the only official document interpreting and explaining the requirements of California planning law, the Guidelines establish standards for assessing the adequacy of local general plans. State law, court decisions and the Guidelines place extreme importance on consistency of the plan elements and the direct correlation between the data collected and policies formulated. In this respect, the updated General Plan includes the following parts:

Goals and Policies: Goals, policies, plan proposals and standards have been developed for issues identified in state law which are relevant to the Town.

Implementing Programs: Specific actions have been identified that the Town will try to undertake to implement the Plan. For example, zoning must be consistent with the land use designations in the Plan.

Background Data: Information has been collected, analyzed and documented on specific subjects to provide a basis for the plan.

The General Plan can provide also base-line environmental information for the Town which can be used to evaluate the need for environmental analysis when specific public or private projects are proposed.

HOW THE PLAN IS ORGANIZED

The overall objective of the General Plan format is to make it manageable and useful to all its readers and still contain all necessary information and policies. To accomplish this objective, the plan is structured around four separate, but highly interrelated, parts. Each part, as discussed below, is intended to convey a different level of information depending on what the reader wants to know.

Introduction: A brief overview of the purpose and use of the General Plan, how it is structured and how it was prepared. This section also contains a summary of public comments from the community workshop.

Plan Summary: The Plan Summary is a brief account of the major goals and policies of the plan. It is intended to provide a brief and readily accessible policy overview regarding the Town of Ross.

Goals, Policies and Implementing Actions: California Planning and Zoning Law places particular emphasis on the fact that the General Plan, elements and parts thereof must comprise an integrated, internally consistent, and compatible statement of policies. All of the elements are interrelated to some degree. However, to better assure internal consistency within the plan, the plan elements have been functionally grouped as follows and described below. All these elements are required.

Community Development Goals, Policies and Implementing Actions:
a. Land Use
b. Circulation
c. Housing

Natural Environment Goals, Policies and Implementing Actions:
a. Open Space
b. Conservation

Health and Safety Goals, Policies and Implementing Actions:
a. Safety
b. Noise

Community Development Goals, Policies and Implementing Actions. Generally, Community Development represents the building features of the community. Goals and policies regarding where, how, and how much residential and non-residential activities take place are established in the Community Development Element. It also addresses the interrelationship between land use, circulation and housing and sets forth recommendations regarding transportation needs.

Natural Environment Goals, Policies and Implementing Actions. Natural Environment combines discussion of Open Space and Conservation issues. It covers the diverse natural resources of the Town's planning area. It focuses on the obvious interrelationship between building features and the natural environment and establishes goals and policies intended to balance the very important goal to protect and enhance the natural environment against the rights of property owners to improve their property.

Health and Safety Goals, Policies and Implementing Actions. Health and Safety addresses natural and man-made hazards which must be considered in conjunction with future development. Goals and policies suggested are intended to recognize these factors in order to assure a safe and healthy community.

Background Basis for the Plan: As contrasted to the previous sections dealing primarily with policy direction, this is the detailed technical background part of the General Plan. The background section provides a complete review of the State Government Code requirements, data, inventories, projections, and other information related to the Town of Ross Planning Area. Further, this section presents and interprets the technical analysis to provide a basis for policy formulation contained in the plan. Specific background sections include:

Land Use Background
Circulation Background
Housing Background
Natural Environment Background
Safety Background
Noise Background

HOW TO USE THE PLAN

The General Plan's intent for future growth and development, both public and private, in the Ross Planning Area is expressed in three ways. The first is in the form of statements of goals sought by the community. Goals are the ideals we strive for, or the desired state of things. The second, and more specific aspect of the General Plan, is policy statements (including standards, where necessary). Policies establish a recognized community position on a particular issue or subject. Plan policies are set forth both as written statements and as policy maps. These are complementary; the written policies set forth the basic approach to be taken while the policy maps show the intended spatial application of the written policies.

Programs are specific actions that the Town or other specific entities intend to implement to achieve objectives and move closer to the community's goals. All of the programs to be implemented in the General Plan will require some type of follow-up actions; either further study, ordinance adoption, special funding consideration or other public review. The details concerning each program should be evaluated at that time.

Many of the decisions made by the Town each year will relate in some way to the Town's General Plan. The General Plan establishes a comprehensive foundation upon which to make decisions concerning specific projects. For example, all zoning, subdivision and land use approvals must be found consistent with the entire general plan. Therefore, the General Plan should have a clear statement of goals and policies based on available data and analysis. Nevertheless, the General Plan is necessarily "general" in scope and should have the flexibility to respond to unique circumstances or more detailed information when specific projects are reviewed.

In summary, the plan can, and should, establish expectations and security for the community regarding the Town's future.

HOW THE PLAN WAS PREPARED

Work on the General plan update began in September, 1986 with the preparation of a Work Program that was approved by the Town Council. The Work Program laid out a series of steps intended to provide a systematic approach for collecting data and providing opportunity for citizen "authorship" of the plan, including all economic segments of the community. Below is a summary of some of the major aspects of the Work Program:

(1) **Step-by-Step Decision-Making Process:** A number of ways were provided for people to participate in identifying issues and reviewing possible recommendations so that there was balanced representation throughout the community. The process follows a well-defined sequence of decision-making steps involving the community as a whole and a Citizen Committee to facilitate a situation whereby residents are truly participating in the plan's formulation. Below is a summary of those steps:

- Development of the Work Program
- Appointment of "Blue Ribbon" Citizen Committee
- Community Workshop #1
- Collection of Data and Review of preliminary background reports on Natural Environment, Health and Safety and Community Development by the Citizen Committee
- Preparation of Preliminary Draft General Plan and review by the Citizen Committee
- Preparation of Draft General Plan for public and agency review
- Community Workshop #2
- Revisions to the Draft General Plan
- Town Council public hearings
- Adoption of the updated Town of Ross General Plan

(2) **"Blue Ribbon" Citizen Committee:** A "blue ribbon" Citizen Committee was appointed to provide a "sounding board" for the data collected and the policy recommendations of the revised General Plan. The approach was intended to provide a liaison with the community as a whole, facilitate community "authorship" of the plan, reduce the time commitment of the Town Council, provide access to the knowledge and expertise of committee members and identify possible changes in the Work Program and special sub-consultant needs as the work proceeded.

(3) **Public Workshops:** Two public workshops at different times in the revision process were an essential part of the work effort. Both workshops were separate from the "formal" public hearings before the Town Council to adopt the revised General Plan. The first workshop was held at the beginning of the work effort to identify issues, community concerns and to help focus the General Plan revision work effort. The second workshop was held after the Draft General Plan was released. The purpose of the second workshop was to obtain initial community comments on the revised plan. Both workshops were facilitated by the firm of Moore, Iacofano, Goltsman (MIG), who also prepared a summary report of workshop comments as part of the record of public participation on the plan's revision (see appendix).

(4) **General Plan Newsletter/Mailing List/Notices:** Development of a General Plan mailing list, notices of public meetings and newsletters helped involve people early on in the process and also to keep people informed throughout. Newsletters and notices were sent to all Town property owners and other people and groups on the General plan mailing list. Other groups include county agencies, surrounding jurisdictions, federal and state agencies, regional agencies, utility companies, non-profit affordable housing groups, etc. In addition, notices were posted and published in the newspaper. General Plan status reports were also prepared periodically for review by the Town Council.

(5) **Coordination with Other Jurisdictions, Agencies and Groups:** The General Plan should also be based on inter-jurisdictional cooperation and assistance to the fullest extent possible. Through noticing, interviews, newsletters and the review of draft documents, the General Plan work was coordinated with the Marin County Planning and Public Works Departments, Golden Gate Transit District, Marin Sanitary Services, Marin Municipal Water District, Ross Elementary School District, PG&E, LAFCO, etc. Coordination was also sought with local groups and entities, such as the

Kentfield/Greenbrae Community Planning Group, and the cities of San Anselmo, San Rafael, Corte Madera and Larkspur.

These aspects of the work effort should be viewed in the context of what the General Plan will do. In many ways, the Town of Ross is unique when compared to other communities; the General Plan content and process should be responsive to this uniqueness. There are no great "policy" alternative choices that the Town will be facing, unlike other communities where major decisions are being made concerning significant growth or changes. The Town of Ross General Plan update is primarily a fine-tuning of the information and data already available and the establishment of goals and policies that are essentially intended to maintain the small-town character and natural qualities of Ross as they are.

SUMMARY OF COMMUNITY WORKSHOP COMMENTS

In December, 1986 a community workshop on the General Plan was held. The intent of the workshop, which was purposely held at the beginning of the work effort, was to identify issues, community concerns and to help focus the General plan revision work effort. The workshop was organized by Daniel Iacofano of the firm of Moore, Iacofano, Goltsman, and a summary report of workshop comments was prepared. The workshop report is available for public review at Town Hall.

The workshop covered discussion of community assets and concerns as they relate to such issues as land use, traffic, safety, housing, noise and open space. The primary assets of the community, as identified in priority order at the workshop, are: (1) small town qualities; (2) natural beauty; (3) community services; (4) special places in the Town (such as Ross Commons, the post office, Ross School); (5) sense of community; (6) location; (7) accessibility of community government; and (8) the charm of Ross' downtown. Some of the special issues and concerns expressed at the workshop include the following:

- **Land Use, Housing and Open Space.** Zoning should maintain existing community character; over-development should not be allowed; park lands and open space should be preserved; trees and other natural resources should be preserved; housing should be available to all age and all economic groups to maintain the social mix of the community; there are no longer starter homes in Ross.

- **Circulation.** Sir Francis Drake Boulevard should not be widened to accommodate more traffic; safe, "walkable" character of Ross should be preserved; adequate emergency access should be assured; parking problems in specific areas should be addressed.

- **Health and Safety.** Emergency planning is needed; police, fire and emergency medical services are adequate and should be maintained; flood control plan is needed; power blowers should be regulated, if permitted at all; consider the public nuisance, health hazard and safety of people (especially children and the elderly) of uncontrolled dogs on the Town's public streets and parks and consider a dog-leash and clean-up ordinance.

SUMMARY OF THE PLAN

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INTRODUCTION AND FUTURE ASSUMPTIONS

The Town of Ross updated General Plan is structured much differently from the existing General Plan. This organization is to comply with the technical requirements of the California Government Code and to provide the background basis for Town policy. Because the General Plan will be used by many people, it must clearly indicate to citizens, builders, decision-makers, other agencies and different Town departments, what Town policies, standards and future actions will be. For this reason, the policy section of the plan is separate from the background section, and the seven general plan elements are grouped under three major elements: Community Development Element; Natural Environment Element; and Health and Safety Element.

The General Plan is an explicit statement of Town goals, policies and actions. By its nature it should also provide a certain degree of flexibility when applied to specific projects; however, those instances should be viewed in the context of achieving the Town's overall goals. Below are some of the major planning factors important to the Town of Ross and the assumptions about them on which anticipated conditions are based.

(1) **Desire to Maintain the Community's "Small Town" Character.** There are basic qualities of the Town of Ross that are critical to protect:

(a) the high quality and fragile natural environment;
(b) the existing "small town" qualities and feeling of the community; and
(c) the attributes, integrity, historical character and design scale of the Town's existing residential areas.

(2) **Limited Land Supply/High Land Prices.** The limited supply of land and high demand for housing are expected to maintain very high prices for buildable sites and existing housing. This condition exists throughout Marin County. Ross will continue to be a highly desirable place to live and is expected to continue to be have some of the highest priced housing in the county. In addition, much of the remaining vacant land in Ross has severe environmental constraints requiring special care when development is proposed.

(3) **Reduced Public Funding Capability.** As a result of past tax initiatives (Propositions 13 and 4) and reduced federal programs benefitting local governments, it is assumed local government will continue to have significantly less funding capability for capital facilities, improvements and services. The ability of the Town to continue to provide adequate services may depend upon special assessments to supplement post-Proposition 13 and Proposition 4 limitations.

(4) **Smaller Households but More Workers Per Household.** There will be a continuing trend toward smaller households although the number of workers per household will continue to increase, resulting in more people commuting to work. The decline in household size will result in a decrease in population in the Town of Ross over the next twenty years, even though the total number of households is expected to increase. This phenomenon is explained in more detail in the Land Use Background section.

(5) **Traffic and Travel to Jobs.** There will continue to be increasing employment growth in San Francisco and in Marin County and increasing residential and employment growth in Sonoma County leading to increasing travel demand along the entire Highway 101 corridor. The Town's population will continue to be mobile, with over 45% working outside of Marin County (primarily in San Francisco) similar to existing percentages. Sir Francis Drake Boulevard will continue to provide a major link to Highway 101 for residents of the Ross Valley. However, since the roadway is currently near capacity, the actual increases in traffic during the morning and evening peak hours are expected to be minimal.

Potential impacts of diversions from Sir Francis Drake through the Town of Ross should be monitored and mitigated, if necessary, to assure minimal impact on local streets.

GOALS OF THE PLAN

The following broad goals have been established to serve as the basis for more specific policies and implementation actions defined in the General Plan:

Land Use Goals

LU-A PRESERVE AND ENHANCE THE HISTORICAL "SMALL TOWN", LOW-DENSITY CHARACTER AND IDENTITY THAT IS UNIQUE TO THE TOWN OF ROSS AND MAINTAIN THE SERENE, QUIET CHARACTER OF THE TOWN'S NEIGHBORHOODS

LU-B REQUIRE HIGH-DESIGN QUALITY THAT ENHANCES THE COMMUNITY, IS CONSISTENT WITH THE SCALE AND QUALITY OF EXISTING DEVELOPMENT AND IS HARMONIOUSLY INTEGRATED WITH THE NATURAL ENVIRONMENT.

LU-C MAINTAIN THE ROSS COMMON AREA AND THE TOWN'S DOWNTOWN AS AN IMPORTANT RECREATION, MEETING AND LOCAL SHOPPING AREA BY ASSURING THAT THE SCALE, QUALITY AND TYPE OF DEVELOPMENT THAT OCCURS IS CONSISTENT WITH THE EXISTING CHARACTER, QUALITIES AND AMENITIES IN THE DOWNTOWN AND SURROUNDING AREA .

LU-D ENCOURAGE CULTURAL, EDUCATIONAL AND RECREATIONAL FACILITIES AND ACTIVITIES THAT MEET THE NEEDS OF THE COMMUNITY AND WHICH ARE COMPATIBLE WITH THE PRESERVATION OF NATURAL AMENITIES AND SURROUNDING AREA RESIDENCES.

LU-E ASSURE THE IMPLEMENTATION OF GENERAL PLAN PROGRAMS AND ENCOURAGE PUBLIC REVIEW AND PARTICIPATION IN ALL ASPECTS OF THE PLANNING PROCESS.

Circulation Goals

C-A MAINTAIN A BALANCED SYSTEM OF TRANSPORTATION (ROADS, TRANSIT, BICYCLE AND WALKING) WITH ADEQUATE AND SAFE CIRCULATION CONSISTENT WITH THE NATURAL ENVIRONMENT AND CHARACTER AND QUALITIES OF THE TOWN OF ROSS.

C-B MINIMIZE IMPACTS ON LOCAL STREETS AND LOCAL CIRCULATION OF MORNING AND EVENING COMMUTE TRAFFIC ON SIR FRANCIS DRAKE BOULEVARD WITHOUT WIDENING SIR FRANCIS DRAKE BOULEVARD.

C-C ACHIEVE, THROUGH A COOPERATIVE EFFORT WITH REGIONAL AND COUNTY JURISDICTIONS AND AGENCIES, A HIGH-QUALITY REGIONAL TRANSPORTATION SYSTEM WHICH WOULD MINIMIZE FUTURE IMPACTS ON THE TOWN OF ROSS.

C-D MINIMIZE IMPACTS CAUSED BY INCREASED USE OF THE PHOENIX LAKE AREA.

Housing Goals

H-A CONSISTENT WITH THE TOWN'S LAND USE GOALS, ATTEMPT TO MEET THE HOUSING NEEDS OF ALL ECONOMIC SEGMENTS OF THE COMMUNITY.

H-B CONSERVE THE EXISTING QUANTITY AND QUALITY OF HOUSING.

Natural Environment Goals

NE-A PRESERVE, MAINTAIN AND ENHANCE THE HIGH-QUALITY AND FRAGILE NATURAL ENVIRONMENT OF ROSS, INCLUDING GOOD AIR AND WATER QUALITY AS WELL AS THE SERENE, QUIET CHARACTER OF ITS NEIGHBORHOODS.

NE-B PRESERVE LANDS WHICH ARE UNIQUE ENVIRONMENTAL RESOURCES INCLUDING SCENIC RESOURCES (RIDGELINES, HILLSIDES AND TREES), VEGETATION AND WILDLIFE HABITAT, CREEKS, THREATENED AND ENDANGERED SPECIES HABITAT, OPEN SPACE AND AREAS NECESSARY TO PROTECT COMMUNITY HEALTH AND SAFETY. THIS MUST BE CONSIDERED WITHIN THE CONTEXT OF FAIRNESS TO THE RIGHTS OF PROPERTY OWNERS.

Health and Safety Goals

HS-A MINIMIZE THE POTENTIAL FOR LOSS OF LIFE, INJURY, DAMAGE TO PROPERTY, ECONOMIC AND SOCIAL DISLOCATION AND UNUSUAL PUBLIC EXPENSE DUE TO NATURAL AND OTHER HAZARDS.

HS-B ENSURE THAT THE TOWN, ITS CITIZENS, BUSINESSES AND SERVICES ARE PREPARED FOR AN EFFECTIVE RESPONSE AND RECOVERY IN THE EVENT OF EMERGENCIES OR DISASTERS.

HS-C MAINTAIN THE OVERALL QUIET ENVIRONMENT IN THE TOWN OF ROSS AND PREVENT EXPOSURE OF RESIDENTS TO UNACCEPTABLE NOISE LEVELS.

MAJOR POLICY FEATURES OF THE PLAN AND DESCRIPTION OF MEANS BY WHICH CONSISTENCY WILL BE ACHIEVED AMONG ALL OF THE GENERAL PLAN ELEMENTS

All of the elements of the General Plan are interrelated to some degree. Each must be viewed in light of the goals and policies of the others. Nevertheless, the key aspects of the plan are to maintain the historic low-density character of the community and to protect natural environmental qualities. The Following is a brief description of some of the major policy features incorporated into the updated General Plan and how they are related to the overall goals of the plan.

(1) **Overall Community Character.** The residents of Ross like the small town, community feel and character of the Town. Special assets identified include open and tree-covered hills, low density of development, architectural scale and quality, Ross Common Park and downtown. From a land use standpoint, the intent of the updated General Plan is to retain these qualities and the existing pattern and scale of development reflective of the fact that there is little vacant land remaining in the Town.

(2) **Protection of the Natural Environment.** Protection of the natural environment continues to be a major focus of the General Plan. Lands of open space value are encouraged to be preserved. Policies are intended to insure that important environmental features, such as ridgelines, hillsides, creeks and trees, are preserved and enhanced.

(3) **Concern for Public Health and Safety.** The Plan identifies various health and safety hazards which must be considered in planning the location, design and intensity of development in a given area. Policies address geologic and seismic risk, flooding, hazardous materials, disaster preparedness, fire and crime prevention. Specific noise standards for indoor and outdoor noise are also included to provide a clear basis for evaluating noise impacts and establishing appropriate noise mitigation design. The plan also calls for consideration of establishing quantifiable noise standards in the Town's Noise Ordinance.

(4) **Transportation Needs.** Maintaining acceptable traffic operations is a primary concern of the Plan. The Plan establishes level of service standards for traffic operations on local streets and evaluates conditions on Sir Francis Drake Boulevard. A primary goal of the plan is not to widen Sir Francis Drake Boulevard, since this would considerably alter the character of the Town. Other possible improvements are evaluated and proposed for consideration as part of the plan.

(5) **Land Use Plan.** The Land Use Plan identifies five residential density ranges, consistent with existing development patterns in the Town. The lowest density range (.1 to 1 unit per acre) is proposed primarily in hillside areas and acknowledges the existence of environmentally sensitive conditions such as steep slopes, important site features, geologic constraints, narrow roads, limited access, fire and other safety concerns, the visual significance of the property, existing development

patterns, etc. Other density ranges are based on existing densities in the Town. The medium high density category is consistent with prevailing densities. This area is located along Bolinas Avenue. The General Plan also proposes a new residential higher density category (15 to 20 units per acre) to be applied to the Ross General Hospital site. This is consistent with the Kentfield/Greenbrae Community Plan recently adopted by the county. Non-residential land use categories include public park and open space, public service, local service commercial, limited quasi-public/private service and limited specialized recreation/cultural. The land use designations will be implemented through the Zoning Ordinance.

(6) **Approach to Architectural Design and Scale of Development.** The General Plan provides overview policies concerning architectural design and density. The design policies are consistent with existing requirements in the Zoning Ordinance and help support the community's desire for high-quality design consistent with community appearance and overall low-density.

(7) **Ross's Planning Area and Sphere of Influence (SOI).** The General Plan designates the planning area as having a direct physical and social influence on the Town's planning but not being subject to annexation. Annexation policies establish criteria for considering possible future annexation of land within the planning area. A major recommendation in the General Plan is the inclusion of the entire Ross General Hospital site and other areas west of Toussin Avenue in the Town's Sphere of Influence and, therefore, subject to possible annexation. This recommendation is being made because the Ross General Hospital property is split among two jurisdictions and the Town should have decision-making power over the property in the event of possible reuse.

(8) **Housing Policies and Programs.** The Plan establishes goals and policies intended to try to meet the Town's housing needs. However, the Plan also recognizes that there is limited land and resources for meeting those needs. A key aspect of the Plan is the designation of the two acres of the existing Ross General Hospital site that are currently located in the Town of Ross for higher density residential use, with senior housing most desirable. Senior housing is a need in the community and it would generate substantially less traffic than a hospital.

(9) **Implementing Actions.** Specific actions intended to help achieve plan goals and policies are identified. These range from consideration of rezoning small areas consistent with land use densities to consideration of revisions to the Town's Noise Ordinance to provide quantifiable standards for enforcement. All of the implementing actions will, and should, be subject to public review and evaluation before they are implemented.

COMMUNITY DEVELOPMENT GOALS, POLICIES AND IMPLEMENTING ACTIONS

COMMUNITY DEVELOPMENT
GOALS, POLICIES AND
IMPLEMENTING ACTIONS

COMMUNITY DEVELOPMENT GOALS, POLICIES AND IMPLEMENTING ACTIONS

INTRODUCTION

Community Development comprises the goals, policies and implementing actions regarding land use, circulation and housing. Community Development focuses on past, present and future development issues that will affect the Town of Ross's quality of life. The Town of Ross is committed to maintaining the historic qualities, scale and low-density of the community. The intent of the General Plan is to continue this important policy while addressing issues of particular concern to the community or required to be addressed in the General Plan by state law.

Since almost all of the land in the Town is developed, the pattern of land use and the standards for the density of population and intensity of use in the plan are consistent with existing development in the Town. Nevertheless, the Community Development portion of the plan plays a central role in bringing together all land use issues, constraints and opportunities, balanced with the numerous needs and desires of the community. Subjects covered include:

(1) **Ross Planning Area:** Covering the corporate limits of the Town of Ross, a small area developed under county jurisdiction north and west of Laurel Grove Avenue and the area surrounding Phoenix Lake, which is administered by Marin Municipal Water District. The Planning Area is also synonymous with the Town's "sphere of influence". The existing Ross General Hospital site and other areas west of Toussin Avenue are proposed to be added to the Town's Sphere of Influence.

(2) **Land Use:** Covering the distribution of land uses throughout the Town.

(3) **Services:** Services affected by the plan include water, sewer and other utilities. The projections and land uses in the plan also provide a basis for planning by the Town and special districts.

(4) **Traffic:** Policies concerning traffic and other circulation issues are included in the Plan. The Plan states as one of its goals not to widen Sir Francis Drake Boulevard to four lanes.

(5) **Housing:** There are limited resources available for meeting housing needs in the Town. One key policy is the potential reuse of the Ross General Hospital site for multiple family housing, preferably for seniors.

(6) **Standards for Population Density:** The General Plan uses the following standards for establishing population density: the conversion of residential units to population is based on 2.7 persons per household; retail uses are based on one employee per 500 square feet of floor area; and office/service uses convert to about 1 employee per 300 square feet of floor area.

COMMUNITY DEVELOPMENT GOALS

Land Use Goals

LU-A PRESERVE AND ENHANCE THE HISTORICAL "SMALL TOWN", LOW-DENSITY CHARACTER AND IDENTITY THAT IS UNIQUE TO THE TOWN OF ROSS AND MAINTAIN THE SERENE, QUIET CHARACTER OF THE TOWN'S NEIGHBORHOODS.

LU-B REQUIRE HIGH-DESIGN QUALITY THAT ENHANCES THE COMMUNITY, IS CONSISTENT WITH THE SCALE AND QUALITY OF EXISTING DEVELOPMENT AND IS HARMONIOUSLY INTEGRATED WITH THE NATURAL ENVIRONMENT.

LU-C MAINTAIN THE ROSS COMMON AREA AND THE TOWN'S DOWNTOWN AS AN IMPORTANT RECREATION, MEETING AND LOCAL SHOPPING AREA BY ASSURING THAT THE SCALE, QUALITY AND TYPE OF DEVELOPMENT THAT OCCURS IS CONSISTENT WITH THE EXISTING CHARACTER, QUALITIES AND AMENITIES IN THE DOWNTOWN AND SURROUNDING AREA .

LU-D ENCOURAGE CULTURAL, EDUCATIONAL AND RECREATIONAL FACILITIES AND ACTIVITIES THAT MEET THE NEEDS OF THE COMMUNITY AND WHICH ARE COMPATIBLE WITH THE PRESERVATION OF NATURAL AMENITIES AND SURROUNDING AREA RESIDENCES.

LU-E ASSURE THE IMPLEMENTATION OF GENERAL PLAN PROGRAMS AND ENCOURAGE PUBLIC REVIEW AND PARTICIPATION IN ALL ASPECTS OF THE PLANNING PROCESS.

Circulation Goals

C-A MAINTAIN A BALANCED SYSTEM OF TRANSPORTATION (ROADS, TRANSIT, BICYCLE AND WALKING) WITH ADEQUATE AND SAFE CIRCULATION CONSISTENT WITH THE NATURAL ENVIRONMENT AND CHARACTER AND QUALITIES OF THE TOWN OF ROSS.

C-B MINIMIZE IMPACTS ON LOCAL STREETS AND LOCAL CIRCULATION OF MORNING AND EVENING COMMUTE TRAFFIC ON SIR FRANCIS DRAKE BOULEVARD WITHOUT WIDENING SIR FRANCIS DRAKE BOULEVARD.

C-C ACHIEVE, THROUGH A COOPERATIVE EFFORT WITH REGIONAL AND COUNTY JURISDICTIONS AND AGENCIES, A HIGH-QUALITY REGIONAL TRANSPORTATION SYSTEM WHICH WOULD MINIMIZE FUTURE IMPACTS ON THE TOWN OF ROSS.

C-D MINIMIZE IMPACTS CAUSED BY INCREASED USE OF THE PHOENIX LAKE AREA.

Housing Goals

H-A CONSISTENT WITH THE TOWN'S LAND USE GOALS, ATTEMPT TO MEET THE HOUSING NEEDS OF ALL ECONOMIC SEGMENTS OF THE COMMUNITY.

H-B CONSERVE THE EXISTING QUANTITY AND QUALITY OF HOUSING.

LAND USE POLICIES

Annexation

LU-1 **Consideration of Potential Areas to be Annexed to the Town.** Annexation of already developed unincorporated areas should be dependent on resident interest, the cost/revenue implications of specific annexation requests and the provision of all Town services to the area.

LU-2 **Ross General Hospital Site.** If the Ross General Hospital site becomes available for another use, the Town will consider annexation of the property to the Town to allow for multi-family housing consistent with the character of the area and the Town of Ross. The entire site and other areas west of Toussin Avenue should be included in the Ross Sphere of Influence.

LU-3 **Upper Toyon Drive Area.** If the area along Upper Toyon Drive, between Makin Grade and Wolfe Grade, currently in the Town's Sphere of Influence as shown in Figure 2, is annexed to the Town of Ross, consideration should be given to readjusting the City of San Rafael boundary so that it is co-terminus with Upper Toyon Drive and does not divide individual lots into two different jurisdictions. Boundary re-adjustment would affect approximately 16 lots.

Design

LU-4 **Overall Town Character.** The "small town", low-density character of Ross shall be retained by:

a. maintaining historic design character and scale;
b. retaining densities consistent with existing development elsewhere in Ross and in the surrounding area;
c. maintaining the serene, quiet character of the Town's neighborhoods;
d. preserving natural features; and
e. minimizing overbuilding of existing lots. Minimizing overbuilding also helps to maintain moderate income housing.

LU-5 **Residential Site Design and Density.** Density of residential development shall recognize natural environmental constraints, hazards, traffic and access, necessary services and general community design and character and shall mitigate any significant impacts of proposed construction. Residential construction should be designed to recognize site constraints and resources. Appropriate site design and density includes avoidance of or clustering away from very steep or hazardous hillsides or other sensitive areas such as natural drainage features. Adequate off-street parking shall also be provided on the site. New construction should be consistent with existing residential development through appropriate building scale and design and quality building materials and landscaping.

LU-6 **Non-Residential Site Design and Intensity.** The intensity and site design of non-residential development shall recognize natural environmental constraints, hazards, traffic and access, parking, necessary services, general community design and character and impacts on surrounding residences. Generally, non-residential construction should be at a low intensity consistent with the surrounding area. New construction should include appropriate building scale and design and quality building materials and landscaping.

LU-7 **Design Approach.** Excellence of design shall be required of all new development. Project design shall enhance important community entryways, local travel corridors and the area in which it is located. New construction shall harmonize style, intensity and type of construction with the natural environment and respect the unique needs and features of each area. Following are some of the criteria to be used in evaluating excellence in project design:

a. Sensitivity to natural landscape and site features
b. Compatibility of colors, materials, scale and building/site design with the surrounding area
c. Use of high quality building materials
d. Screening of off-street parking
e. Attractive screening of equipment and accessory structures
f. Incorporation of fire/police safety concerns
g. Attractive, drought-tolerant landscaping
h. Good access, circulation and off-street parking consistent with the features of the site
i. Structural safety
j. Minimize grading and maximize retention of and preservation of natural elevations, ridgelands and natural features, including lands too steep for development, geologically unstable areas, wooded canyons, areas containing significant native flora and fauna, rock outcroppings, view sites, areas suitable for active or quiet recreation, watersheds and watercourses.
k. Provide safe and adequate capacity for watercourses.
l. Development of dwellings or dwelling groups should not create excessive mass, bulk or repetition of design features.

LU-8 **Hillside and Ridgeline Views.** Views of the hills and ridgelines from public streets and parks shall be preserved where possible, considering at the same time the rights of landowners.

LU-9 **Historic Buildings and Areas.** Buildings and areas with special and recognized historic or aesthetic value shall be preserved and the historic character and scale shall be maintained.

LU-10 **Building Heights.** Low building heights shall be maintained throughout the Town, with generally a maximum building height of 30 feet.

Land Use Categories

LU-11 **Residential Land Use Categories.** Residential land use categories as shown on the Land Use Plan include the following.

a. **Very Low-Density** (.1 to 1 unit per acre; an average of 0.3 to 2.7 persons per acre); consistent with the Town's R-1:B-A zoning, with lots 1 acre or more in size.

b. **Low-Density** (1 to 3 units per acre; an average of 2.7 to 8.1 persons per acre); consistent with the Town's R-1:B-20 and R-1:B-15 zoning, with lots down to 20,000 or 15,000 square feet in size, respectively.

c. **Medium Low-Density** (3 to 6 units per acre; an average of 8.1 to 16.2 persons per acre); consistent with the Town's R-1:B-10 and R-1:B-7.5 zoning, with lots down to 10,000 or 7,500 square feet in size, respectively.

d. **Medium High-Density** (6 to 10 units per acre; an average of 16.2 to 27 persons per acre); consistent with the Town's R-1:B-6 and R-1 zoning, with lots down to 6,000 or 5,000 square feet in size, respectively.

e. **Higher-Density** (15 to 20 units per acre; an average of 40 to 54 persons per acre); with approximately 2,000 square feet of land area per unit. This designation recognizes potential reuse of the existing Ross General Hospital site and would not be applied to any other areas of the Town of Ross.

Maximum densities are not guaranteed. Residential development on any site shall respond to existing zoning and the following factors: site resources and constraints; potentially hazardous conditions; traffic and access; adequacy of infrastructure (water, sewer, etc.); design policies; development patterns; and prevailing densities of adjacent areas.

LU-12 **Non-Residential Land Use Categories.** Non-residential land use categories as shown on the Land Use Plan include the following:

a. **Park and Open Space:** Dedicated parks, secured open space and lands managed by the Marin Municipal Water District. Building intensity and population density is essentially 0.

b. **Local Service Commercial:** Applies to the downtown area and is intended to constitute a compact, centrally located area of such size as is necessary to contain local service commercial uses necessary for the convenience of the Town residents. Uses could be allowed up to a 1.3 Floor Area Ratio but are dependent on consistency with design, parking, height and other policies or standards. Floor Area Ratio is the total gross building square footage divided by the land area, exclusive of public streets. For example, a one-story building covering an entire lot would have a Floor Area Ratio of 1.0.

c. **Public Service:** Lands in this classification are existing public sites upon which public service uses are appropriate, such as Town Hall, Public Safety buildings, post office and Ross Elementary School. Generally, the FAR for these sites should be less than .5. Allowances may be made for increased intensity if needed for health and safety purposes.

d. **Limited Specialized Recreation/Cultural:** This is applied to established recreational or cultural uses (Marin Art and Garden Center and the Lagunitas Tennis Club) which should have very limited intensity, consistent with community character and environmental constraints. FAR is less than .1.

e. **Limited Quasi-Public/Private Service:** The Limited Quasi-Public/Private Service designation recognizes existing quasi public uses, such as churches and private schools, located throughout the community which are expected to remain in a similar use throughout

the planning period and which should be subject to standards to minimize impacts on surrounding residential areas. Intensity of development should be less than 1.0 FAR and shall meet height limit and other Town development standards and the standards of the zone in which they are located.

Non-residential intensities are not guaranteed. Non-residential development on any site shall respond to existing zoning and the following factors: site resources and constraints; potentially hazardous conditions, traffic and access, adequacy of infrastructure (water, sewer, etc.), Town design policies and development patterns of adjacent areas.

Community Services

LU-13 **Fire and Police Services.** Maintain adequate fire protection and police services. Minimize increases in service needs from new development through fire and crime prevention programs.

LU-14 **Water Conservation.** Require water conserving fixture types in all new and extensively remodeled homes and encourage water conserving landscape design. A list of possible low-water use plants is available from the Marin Municipal Water District.

LU-15 **Water and Sewer Service.** Insure provision of adequate water and sewer facilities to meet needs of new development.

LU-16 **Public Arts and Cultural Activities.** The Town recognizes the positive social effects that the arts and cultural activities have on the Town's residents and will allow these types of activities with appropriate regulation for minimizing impacts on surrounding area residences.

LU-17 **City/School Cooperation.** Continue joint maintenance and use arrangements for school recreation facilities and the Ross Common area.

LU-18 **Relationship to Other Public Agencies.** Cooperate and coordinate with other governmental entities and special districts in the reasonable planning and use of facilities within or adjacent to the Town.

CIRCULATION POLICIES

Level of Service

C-1 **Level of Service along Sir Francis Drake Boulevard.** Level of Service C is the Town objective for transportation conditions during morning and evening peak hours along Sir Francis Drake Boulevard. It is recognized, however, that Level of Service E is possible in certain locations due to increasing traffic in the future. Though undesirable, these conditions are preferable to major, irreversible changes, such as widening of Sir Francis Drake Boulevard to four lanes through the Town of Ross. Land, scenic resources and community character are the Town's most significant resources -- circulation changes that diminish these assets are considered irreversible and should be avoided when possible.

C-2 **Improvements or Actions Related to the Increase in Traffic on Sir Francis Drake Boulevard.** The Town will consider minor improvements to Sir Francis Drake Boulevard that improve safety and traffic flow and minimize diversions on to local streets. Any improvements must be consistent with community character and other Town goals and policies. Specific actions which may be considered include (see the Circulation Background section for a further description):

a. Lengthening the left-turn bay on Sir Francis Drake Boulevard at Lagunitas Avenue
b. Monitoring traffic on Shady Lane for infiltration of through traffic and introduce traffic impediments on Shady Lane if infiltration becomes a problem.

C-3 **Level of Service on Residential Streets.** Maintain lower levels of traffic use (Levels of Service A and B) on local residential streets and intersections.

Traffic Diversions

C-4 **Traffic Diversions.** Diversions of through traffic on local residential streets should be minimized to maintain a high quality of life in the Town of Ross. Where local streets are adversely affected by traffic intrusion and diversions from Sir Francis Drake Boulevard, the Town will consider increased enforcement and possible street design changes to minimize the diversions. In considering possible actions, the decision would be based on, but not be limited to, the following: analysis of operational features; police, fire and emergency services access; neighborhood support; design impacts; and potential effects on the Town as a whole.

Transit and Other Measures to Reduce Traffic and Increase Accessibility

C-5 **Transit.** The development of a safe, efficient, reliable regional public transit system to provide a convenient alternative to driving will be encouraged. The Town will continue to work with local groups, other Ross Valley communities, the Marin County Transit District and the Golden Gate Bridge, Highway and Transportation District to provide increased handicapped-accessible transit service, commuter service and local service.

C-6 **Measures to Reduce Peak Period Traffic.** The Town will encourage measures to reduce peak period traffic by participating, when appropriate, with other agencies and jurisdictions in the following:

a. Increasing vehicle occupancy through carpooling and transit use;
b. Encouraging bicycle trips; and
c. Participating in the use of flex-time outside of the main morning and evening commute times.

Regional Transportation Issues

C-7 **County/Regional Funding of Highway 101 Corridor Improvements.** Recognizing that some Highway 101 improvements will improve traffic flow on Sir Francis Drake Boulevard, the Town endorses the need for an equitable county/regional funding approach to pay for needed Highway 101 corridor improvements and the development of alternative means of transportation.

C-8 **Coordination with Regional Plans.** The Town will coordinate with other jurisdictions and the Highway 101 Corridor Study Phase II program to achieve needed Highway 101 corridor improvements and to study alternative methods and locations of transportation facilities.

Bicycle and Pedestrian Circulation

C-9 **Bicycle Routes.** The Town will make every effort to develop and maintain a safe and logical bicycle route system which is coordinated with the Countywide system to provide an alternative to driving.

C-10 **Bicycle Racks.** Bicycle racks should be provided at major destination points, including: commercial projects as part of the conditions of approval; park facilities; schools; post office and other public facilities; etc.

C-11 **Pedestrian Circulation.** Safe pedestrian circulation is recognized as an important concern in the community. In appropriate locations, consistent with the design character of the community, road improvement and other construction activity should provide appropriate pedestrian access when possible. At the same time, the Town's ambience is in no small part due to its suburban-country, small-town qualities, which are characterized by the widespread absence of concrete curbs, shoulders and gutters. The Town's bucolic character should be continued and given priority over other non-safety related circulation issues.

HOUSING POLICIES

Discrimination

H-1 **Housing Discrimination.** Promote equal opportunity in the housing market for all persons regardless of race, ethnic background, religion, marital status, sex, age disability, sexual preference or family composition, and refer to the appropriate county, state or other agencies for action when necessary to prevent discrimination.

Protecting and Conserving Existing Housing

H-2 **Housing Rehabilitation.** Help implement appropriate programs for conserving and rehabilitating the viable older housing in the Town which preserves and enhances community character and, where possible, retains low and moderate income units.

H-3 **Housing Conditions.** Protect residents and maintain the housing by enforcing the Building and Fire Code for all types of residential units.

New Market and Below Market Rate Housing

H-4 **Second Units.** Allow the voluntary delivery of rental housing through well designed secondary residential units in appropriate locations where there is an owner-occupant living in the principal residence.

H-5 **Subsidized Rental Housing.** Encourage rental subsidy programs administered by the Marin County Housing Authority which can be applied to existing housing.

H-6 **Inclusionary Requirement.** Residential projects of 10 or more lots or units shall be required to provide at least 15% of the units affordable to low-and moderate-income households. The Town will coordinate with the Marin County Housing Authority in establishing eligibility requirements, resale controls and other special requirements in implementing this policy.

H-7 **Ross General Hospital Site.** The 2 acre portion of the Ross General Hospital site located in the Town of Ross is designated for higher density residential use (15 to 20 units per acre). If the entire property is annexed to the Town of Ross (see Policy LU-2), the policies and programs in the General Plan shall apply to the entire site. The site will be rezoned to a higher density or planned district classification, with final density to be established after complete analysis of site constraints and compliance with the development standards of this plan to be done as part of the development application review process.

The Town will offer incentives as part of the Town's review of the development application if additional low and moderate income units are provided over and above those required under the Town's inclusionary requirement (see Policy H-6, above). Those incentives include density bonuses over 15 units per acre up to but not exceeding 20 units per acre, fast-track processing and reduction or waiver of some fees. The Town will also explore ways of using appropriate federal or state financing programs or non-profit housing assistance to reduce the costs of the units. Any programs that provide below market rate housing should guarantee the long-term affordability of the units through resale deed restrictions or other means. Any re-use of the site for institutional use shall not increase traffic above its current level, and provision of adequate parking must be ensured. Location and traffic conditions suggest that an ideal re-use would be housing for low-and moderate-income seniors, a type of housing greatly needed in the area.

COMMUNITY DEVELOPMENT IMPLEMENTING ACTIONS

CD-a. **Phase II 101 Corridor Study.** Continue participation in the Highway 101 Corridor Study.

CD-b **Monitor Traffic Diversions and Impacts.** The Town will monitor traffic diversions on Shady Lane and traffic conditions along Sir Francis Drake Boulevard. Consideration will be given to increasing the length of the left-turn bay at Lagunitas Avenue.

CD-c **Rezoning.** Zoning Districts and the Zoning Map will be revised where necessary to conform to General Plan land use designations, densities and intensities. Rezoning actions shall consider the following, among others:

(1) Rezoning hillside parcels over 30% slope to 2.5 acre minimum lot size;

(2) Rezoning other areas as appropriate;

(3) Zoning text changes as appropriate; and,

(4) Architectural or design review.

CD-d **Ross General Hospital Site.** Pursue adding the entire Ross General Hospital site and other areas west of Toussin Avenue to the Town of Ross Sphere of Influence.

CD-e **Design Review Guidelines.** Consider the development of design review guidelines as a basis for reviewing and expediting development applications. Such standards shall be designed so as not to constrain the development of low-and moderate-income housing.

CD-f **Town Variance Procedures.** Review and evaluate possible changes to variance procedures and standards to minimize overbuilding of existing lots and to maintain moderate income housing.

CD-g **Housing Element Update.** Update the Town's General Plan Housing Element, consistent with state law requirements, by July 1, 1990.

CD-h **Inter-Jurisdictional Coordination.** Coordinate with the following jurisdictions concerning land use issues affecting the Town of Ross:

(1) **San Anselmo:** Revision of the San Anselmo General Plan; potential acquisition of Bald Hill; master plan for the San Francisco Theological Seminary, including off-campus housing.

(2) **San Rafael:** Revision of the San Rafael General Plan; revision of the San Rafael City boundary to Upper Toyon Drive, between Makin Grade and Wolfe Grade, if/when annexation of the area occurs.

(3) **Kentfield Planning Advisory Board:** Implementation of the Kentfield/Greenbrae Community Plan.

(4) **LAFCO:** Amendment to the Town of Ross Sphere of Influence to include the entire Ross General Hospital site and other areas west of Toussin Avenue; annexation proceedings as needed.

(5) **Marin County:** Update of the Marin Countywide Plan.

CD-i **ABAG Housing Need Numbers.** Review and comment on any new housing need determinations made for the Town of Ross by the Association of Bay Area Governments (ABAG) to assure that they consider the development constraints and projections in the General Plan.

CD-j **Two Acre Portion of the Ross General Hospital Site Located In Ross.** As a means of providing adequate sites for housing and to assist in development of adequate housing to meet the needs of low and moderate income households, the Town will rezone the two acre portion of the Ross General Hospital site located in Ross to allow for multiple family housing. The Town will also offer incentives as part of the Town's review of the development application if additional low and moderate income units are provided over and above those required under the Town's inclusionary requirement. Those incentives include density bonuses over 15 units per acre up to but not exceeding 20 units per acre, fast-track processing and reduction or waiver of some fees. The Town's Public Works and Planning Department will also explore ways of using appropriate federal or state financing programs or non-profit housing assistance to reduce the price of the units. Specific actions include:

(1) **Zoning:** Re-zone the site to a multiple family or planned district residential zoning classification to allow 15 to 20 units per acre. Appropriate parking and other development standards will be established for the site's development. Such standards shall be designed so as not to constrain the development of low-and moderate-income housing.

(2) **Obtain and Maintain Information on Available Programs and Development Options:** Establish and maintain contact with the Marin County Housing Authority, Ecumenical Association for Housing, Ross Valley Ecumenical Association for Housing and the Marin County Planning Department (Community Development Block Grant Program), obtain information on available programs and develop of list of possible funding programs as well as development options that may be appropriate at this site. This information will be used to identify actions which the Town will undertake to promote low and moderate income housing and as a means of evaluating the use of various development or funding options at this site.

(3) **Coordinate with the Developer and Initiate Town Actions as Appropriate:** Explore the use of Community Development Block Grant (CDBG), county bond program funding or other funding for possible use at this site and review funding options with the site's developer. These actions will also identify those measures which the Town can undertake if additional low and moderate income units are provided over and above those required under the Town's inclusionary requirement. Such actions may include applying for CDBG funds, endorsement of project sponsor applications for funds and Town coordination with funding agencies.

(4) **Town Incentives:** Coordinate with the developer during the project review process concerning Town incentives for low-and moderate-income housing. Such incentives include density bonuses, fast-track processing and reduction or waiver of some fees.

(5) **Resale Controls:** Coordinate with the Marin County Housing Authority to establish resale controls and other means to keep the project's low-and moderate-income units affordable over time.

CD-k **Equal Housing Opportunity Actions:** The Town's Public Works and Planning Department will refer people to the appropriate county, state or other agencies for action when necessary to prevent discrimination in the housing market. In order to assist this process, the Public Works and Planning Department will undertake the following actions:

(1) **Obtain Information:** Contact local agencies involved in housing discrimination, including the Housing Center of Marin, Marin County Housing Authority, Marin Center for Independent Living, etc. to establish a liaison between the Town and appropriate agencies and to obtain brochures and other information about fair housing laws and procedures.

(2) **Post Information:** Post information at Town Hall and other appropriate locations, including the Post Office.

(3) **Information Available at Town Hall:** The Public Works and Planning Department will have informational brochures available at Town Hall and will refer people to the appropriate agencies.

CD-l **Housing Rehabilitation Assistance:** The Town's Public Works and Planning Department will be responsible for undertaking the following action programs to publicize and facilitate rehabilitation loan programs:

(1) **Obtain Information:** Contact local agencies involved in rehabilitation loan programs, including the Marin County Housing Authority, Marin County Planning Department (Community Development Block Grant Program), etc. to establish a liaison between the Town and appropriate agencies and to obtain brochures and other information about

rehabilitation loan programs. Such programs include the Rehabilitation Loan Program administered by the Marin County Housing Authority.

(2) **Post Information:** Post information at Town Hall and other appropriate locations, including the Post Office.

(3) **Provide Information in Mailers:** Provide information on available programs when Town mailers are sent out to residents or to groups in the community, including property owners groups, senior groups, etc.

(4) **Initiate Other Actions:** The Town's Public Works and Planning Department will coordinate other actions, as feasible and appropriate, with program sponsors. Such actions may include providing facilities for agency workshops or offering technical assistance to low and moderate income homeowners. Technical assistance will be coordinated by the Public Works and Planning Department and will include information on available programs, application processing assistance, list of possible contractors and assistance in understanding Zoning or Building Code requirements.

CD-m **Rental Housing Assistance Programs:** The Town's Public Works and Planning Department will be responsible for undertaking the following action programs to publicize rental housing assistance programs:

(1) **Obtain Information:** Contact local agencies involved in rental assistance programs, including the Marin County Housing Authority, to establish a liaison between the Town and appropriate agencies and to obtain brochures and other information about rental housing programs. Such programs include the Section 8 Rental Assistance Program, Project Independence and the Rebate for Marin Renters Program administered by the Marin County Housing Authority.

(2) **Post Information:** Post information at Town Hall and other appropriate locations, including the Post Office.

(3) **Provide Information in Mailers:** Provide information on available programs when Town mailers are sent out to residents or to groups in the community, including property owners groups, senior groups, etc.

(4) **Second Unit Applications:** Explore ways of using available rental housing assistance programs for second units or at the Ross General Hospital site. The Public Works and Planning Department will provide information in Town mailers and to second unit applicants concerning available rental assistance programs and requirements.

CD-n **Community Development Block Grant Program:** Through the Town's participation in funding decisions for the use of Community Development Block Grant funds, encourage the funding of programs that help implement Town of Ross housing goals, policies and programs. The Town's involvement would be through participation in decision-making for both the Upper Ross Valley Planning Area share of funds and Countywide share of funds. Specific programs include possible funding of low-and moderate-income housing at the Ross General Hospital site, rental assistance programs and rehabilitation loan programs.

CD-o **Second Units:** With the intent of increasing the liklihood of new second units, the Town Council will consider changes to parking standards and unit size requirements in the Town's Second Unit Ordinance so they are similar to many other Marin County communities. In addition, the Town Public Works and Planning Department will provide information on second units.

(1) **Parking Requirements:** Consider slightly reducing parking requirements in recognition of the size differential between primary and second units.

(2) **Unit Size Requirements:** Consider revising size limitations to define them in terms of maximum square footage rather than as a percentage of the size of the primary unit.

(3) **Provide Information:** The Town Public Works and Planning Department will collect information on the construction of second units. Information sources include Ecumenical Association for Housing, California Housing Finance Agency Double Unit Opportunity Program, DUO Housing, California Department of Housing and Community Development, etc. The Town Public Works and Planning Department will: (1) provide information at Town Hall to prospective applicants; (2) include information in Town mailers sent out to residents or to groups in the community; and (3) post information at Town Hall and other appropriate locations, including the Post Office.

CD-p **Phoenix Lake Parking.** Consider actions that would minimize safety hazards and disturbance to neighbors created by parking and traffic.

CD-q **Historic Buildings and Areas.** Encourage a study to identify historically significant buildings and structures.

SUMMARY OF HOUSING ELEMENT QUANTIFIED OBJECTIVES AND PROGRAMS
(Government Code Section Requirement Shown in Parenthesis)

HOUSING NEED (§65583(b))	QUANTIFIED OBJECTIVE
A. New Construction	60 Units
B. Rehabilitation	30 Units
C. Conservation	Existing Housing

PROGRAM PURPOSE	PROGRAM ACTION(S)	AGENCY RESPONSIBLE	TIME FRAME
A. Provide Adequate Sites (§65583(c)(1))			
1. Insure Total Dwelling Unit Capacity	CD-c; CD-d; CD-j (1-2)	Town of Ross	1988/89
2. Provide Sites Suitable for a Variety of Housing	CD-c; CD-d; CD-j (1-2)	Town of Ross	1988/89
B. Assist in Development of Adequate Housing to Meet the Needs of Low and Moderate Income Households (§65583(c)(2))			
1. Utilize Federal and State Financing	CD-j (2,3 and 5); CD-m (1-4); CD-n	Town of Ross, Housing Authority Marin County and others	1988/89
2. Provide Regulatory Concessions and Incentives	CD-j (1 and 4)	Town of Ross	1988/89
C. Address and where Appropriate and Legally Possible Remove Government Constraints (§65583(c)(3))			
1. Land Use Controls	CD-j (1); CD-o (1-2)	Town of Ross	1989
2. Building Codes	None necessary	Town of Ross	
3. Site Improvements	None necessary	Town of Ross	
4. Fees and Exactions	None necessary	Town of Ross	
5. Processing and Permit Procedures	CD-e; CD-f	Town of Ross	1988/89
D. Conserve and Improve the Condition of the Existing Affordable Housing Stock (§65583(c)(4))	CD-l (1-4); CD-f; CD-h (1)	Town of Ross, Housing Authority	1988/89
E. Program to Promote Equal Housing Opportunity (§65583(c)(5))	CD-k (1-3)	Town of Ross	1988/89
F. Other Housing Programs	CD-g; CD-i	Town of Ross	1989/90

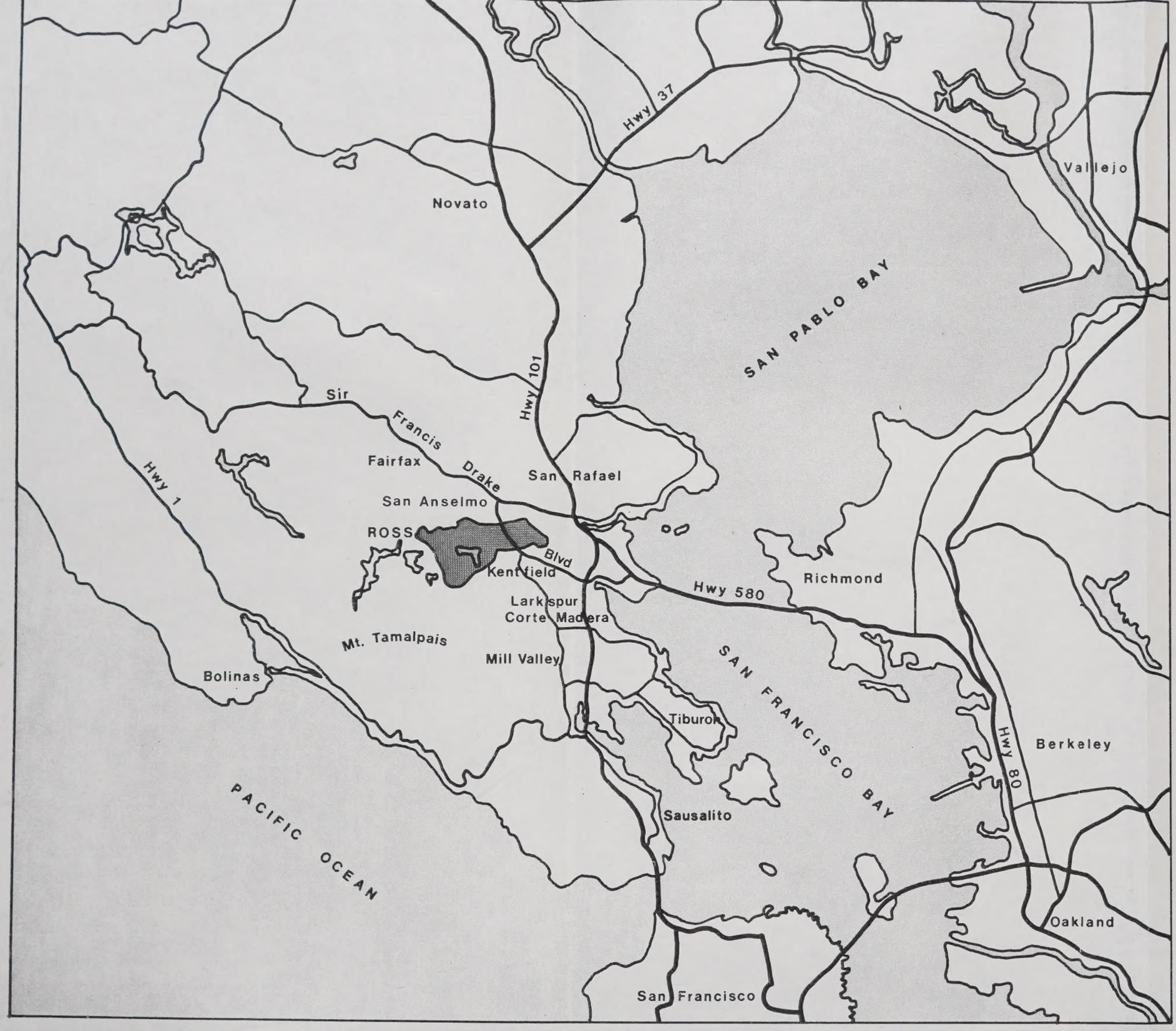

Figure 1
TOWN OF ROSS
REGIONAL LOCATION

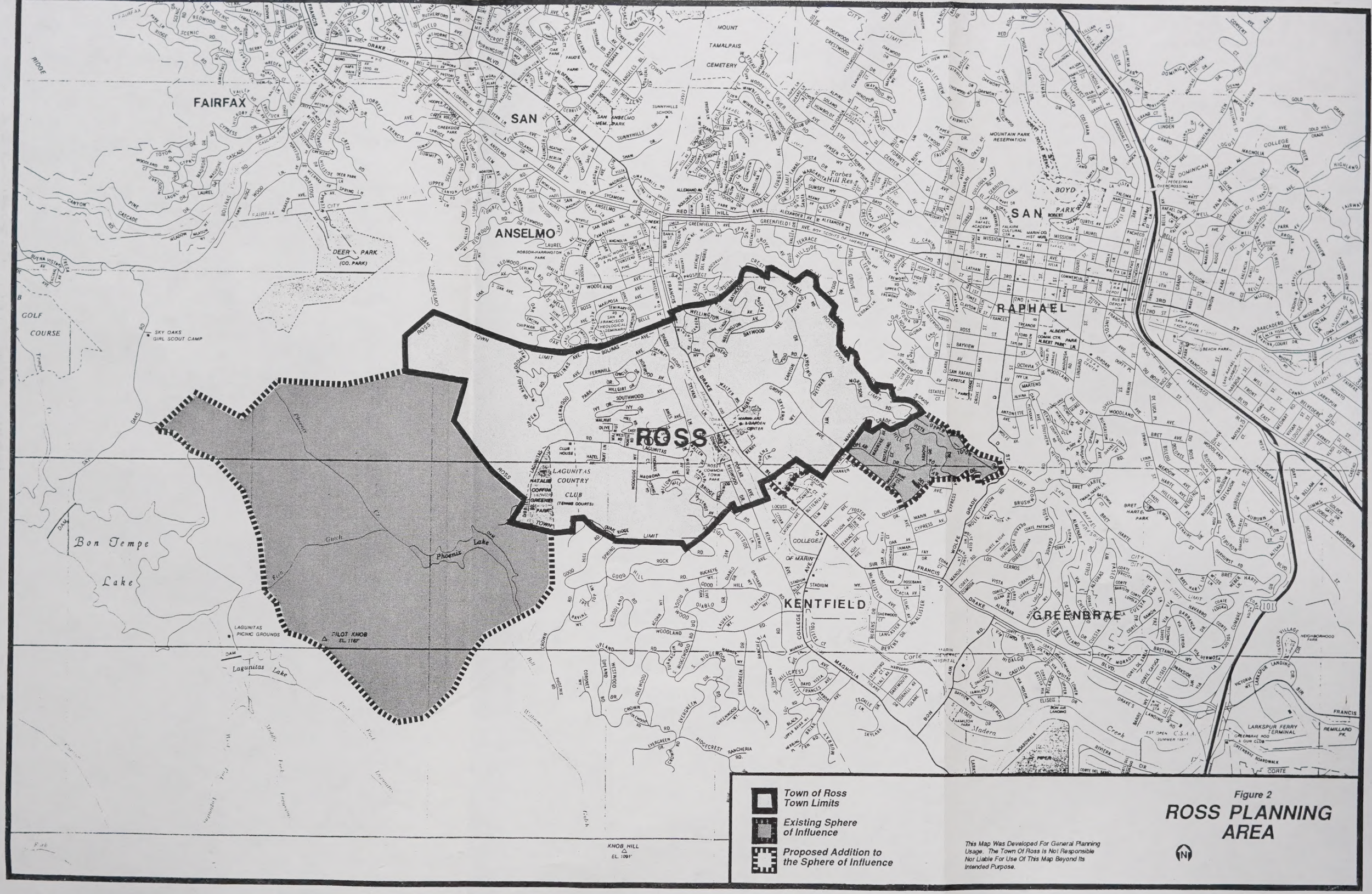
FAIRFAX
SAN ANSELMO
ROSS
KENTFIELD
GREENBRAE
SAN RAPHAEL
MOUNT TAMALPAIS CEMETERY
DEER PARK (CO. PARK)
GOLF COURSE
SKY OAKS GIRL SCOUT CAMP
LAGUNITAS COUNTRY CLUB
LAGUNITAS PICNIC GROUNDS
PILOT KNOB EL. 1187'
KNOB HILL EL. 1091'
Bon Tempe Lake
Lagunitas Lake
Phoenix Lake
Forbes Hill Res.
MOUNTAIN PARK RESERVATION
LARKSPUR FERRY TERMINAL
SAN ANSELMO MEM. PARK
SUNNYHILLS SCHOOL
ROBSON-HARRINGTON PARK
ROSS COMMON TOWN PARK
MARIN ART & GARDEN CENTER
MARIN GENERAL HOSPITAL
COLLEGE OF MARIN
SAN FRANCISCO THEOLOGICAL SEMINARY
ALBERT PARK
BOYD PARK
DOMINICAN COLLEGE
FALKIRK CULTURAL CTR.
MARIN CO. HIST. MUS.
Town of Ross Town Limits
Existing Sphere of Influence
Proposed Addition to the Sphere of Influence
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Figure 2
ROSS PLANNING AREA
N

VL	Very Low Density (.1-1 Unit/Acre)	C	Local Service Commercial
L	Low Density (1-3 Units/Acre)	OS	Public Park and Open Space
ML	Medium Low Density (3-6 Units/Acre)	PS	Public Service
M	Medium Density (6-10 Units/Acre)	QP	Limited Quasi-Public/ Private Service
H	Higher Density (15-20 Units/Acre)	RC	Limited Specialized Recreation/Cultural

Figure 3

LAND USE PLAN

- Residential: Less than 1 Unit/Acre
- Residential: 1 to 2.1 Units/Acre
- Residential: 2.1 to 2.9 Units/Acre
- Residential: 2.9 to 4.3 Units/Acre
- Residential: 4.3 to 5.8 Units/Acre
- Residential: 5.8 to 7.2 Units/Acre
- Residential: 7.2 to 8.7 Units/Acre
- Residential: More than 8.7 Units/Acre
- Sites w/Additional Develop. Potential*
- Vacant
- Park and Open Space
- Commercial
- CulturalPvt Rec/ Religious
  C = Church
- Public/Quasi-Public
  S = School
  G = Government
  H = Hospital

Source: Based upon Marin County Assessor's Office records and field surveys undertaken as part of the General Plan update.

*Known larger sites with one unit on the property and the "potential" for additional development

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Figure 5

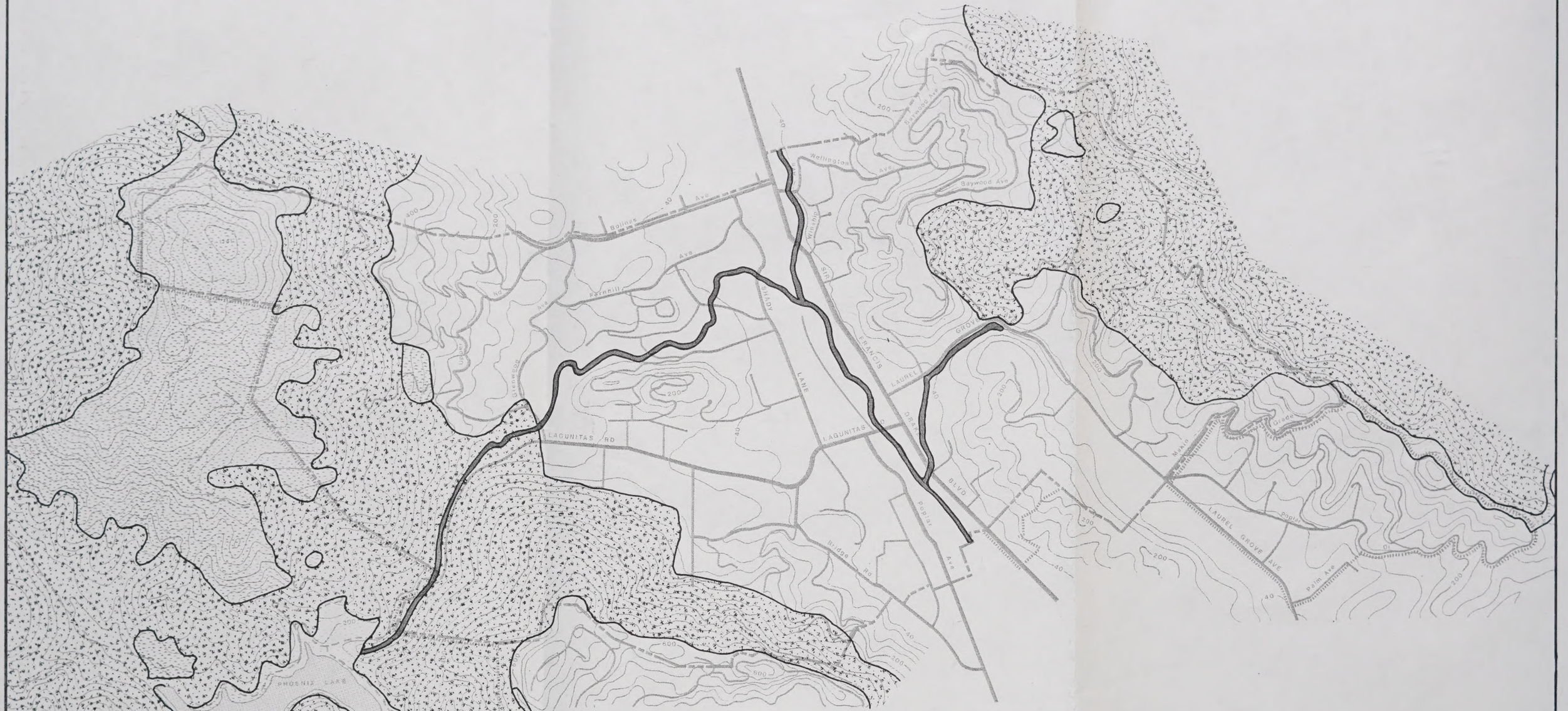
EXISTING LAND USE

N

General Plan

0 500 1000 1500 2000

TOWN OF ROSS



Source: Major biotic communities derived from US Geological Survey maps. Threatened and Endangered species from the California Department of Fish and Game "California Natural Diversity Data Base" are discussed in the text of the General Plan.

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Figure 7

MAJOR BIOTIC COMMUNITIES

General Plan

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TOWN OF ROSS

NATURAL ENVIRONMENT GOALS, POLICIES AND IMPLEMENTING ACTIONS

NATURAL ENVIRONMENT GOALS, POLICIES AND IMPLEMENTING ACTIONS

INTRODUCTION

State law requires that both an Open Space Element and Conservation Element be included as part of the General Plan. Natural Environment combines both of these elements together since there is much overlap between the two. For the purposes of the General Plan, Natural Environment covers both "managed" resources such as air quality and water quality, and "protected" resources such as wildlife habitat, important natural areas and scenic resources.

More than any other factor, natural features and resources have shaped both the growth and form of the Town of Ross and the experiences associated with the area. By far the greatest assets noted at the first community workshop on the General Plan are Ross's small town qualities and its natural beauty. A central concern of the General Plan update, therefore, will be to build upon current Town policy and continue to protect the Town's natural resource areas. Specifically, the intent of the updated General Plan is to continue to protect natural resource areas which have high wildlife habitat value, which physically and visually demarcate the Town from adjoining areas, which contribute otherwise to the scenic value of the community setting and which are important for the preservation of air and water quality, conservation of soils, and safety. The topics covered under Natural Environment include:

(1) **Environmental Quality and Scenic Lands:** Citizen concerns for the preservation of the environmental qualities which have attracted people to Ross have stressed the need to preserve the hills, ridgelines, trees and creek areas.

(2) **Open Land:** Open land is a necessary balance to development. One of the main reasons for large lot zoning regulations, building coverage limits and building setbacks is to ensure a degree of openness in the built portions of the Town. In addition to these spaces for separating homes, community character can be maintained by retaining larger areas as visual relief. Open land may be in its natural condition or as a more formal park.

(3) **Open Space Need and Management:** The purpose of open land involves many factors, such as scenic values, natural habitat preservation, access for recreation, and keeping hazardous areas free of structures. The increasing costs of the land, maintenance and potential liability associated with ownership are factors that should be considered in future open space acquisition or preservation. Acquisition of open space land would add maintenance and management costs and potential liability exposure. Securing and preserving valuable open space through the development review process and other approaches that minimize on-going Town costs and liability exposure could still achieve Town open space objectives.

(4) **Vegetation and Wildlife:** There are numerous biotic communities in the Ross area which provide important vegetation and wildlife habitat. These include grasslands, oak savanna, oak woodland, and riparian areas. These areas also provide habitat for some threatened and endangered species. The protection of these areas for meaningful habitats is a prime concern in the Natural Environment Element.

(5) **Archaeological Resources:** Archaeological sites should be protected. There are eight known archaeological sites located in the Town of Ross.

NATURAL ENVIRONMENT GOALS

NE-A PRESERVE, MAINTAIN AND ENHANCE THE HIGH-QUALITY AND FRAGILE NATURAL ENVIRONMENT OF ROSS, INCLUDING GOOD AIR AND WATER QUALITY AS WELL AS THE SERENE, QUIET CHARACTER OF ITS NEIGHBORHOODS.

NE-B PRESERVE LANDS WHICH ARE UNIQUE ENVIRONMENTAL RESOURCES INCLUDING SCENIC RESOURCES (RIDGELINES, HILLSIDES AND TREES), VEGETATION AND WILDLIFE HABITAT, CREEKS, THREATENED AND ENDANGERED SPECIES HABITAT, OPEN SPACE AND AREAS NECESSARY TO PROTECT COMMUNITY HEALTH AND SAFETY. THIS MUST BE CONSIDERED WITHIN THE CONTEXT OF FAIRNESS TO THE RIGHTS OF PROPERTY OWNERS.

NATURAL ENVIRONMENT POLICIES

Resource Protection

NE-1 **Protection of Environmental Resources.** Environmental resources shall be protected and enhanced. Environmental resources include, but are not limited to, hillsides, ridgelines, creeks, drainageways, trees and tree groves and threatened and endangered species habitat. Such preservation efforts shall consider at the same time the rights of landowners.

NE-2 **Threatened and Endangered Species.** Threatened or endangered species of wildlife and plants, as well as other resources which stand out as unique in the planning area because of their scarcity, scientific value, aesthetic quality or cultural significance shall be protected.

NE-3 **Air and Water Quality.** Projects in Ross shall maintain acceptable air and water quality.

Creeks and Drainageways

NE-4 **Creek and Drainageway Setbacks.** Developments in upland areas shall maintain a setback from creeks or drainageways. Setbacks from creeks shall be maximized to protect the natural resource value of riparian areas and to protect residents from geologic and other hazards.

NE-5 **Creek and Drainageway Maintenance and Enhancement.** Creek clean-up and enhancement are critical for health, safety and environmental protection reasons. The Town will explore with property owners means of keeping debris clear for proper drainage and enhancing creeks and drainageways for wildlife habitat.

NE-6 **Creeks and Riparian Vegetation.** Creeks and riparian vegetation are essential elements of the Town's environment valued by residents. Modification of natural channels should be done in a manner that retains and protects creekside vegetation in its natural state as much as possible. When vegetation must be removed and soil disturbed, the area should be reseeded or replanted with native plants of the habitat as soon as possible, removing broom and other aggressive exotic plants. Replanting with exotic plants should be avoided.

Open Space

NE-7 **Purpose of Open Space Preservation.** Existing and future open space areas shall be preserved for visual greenbelts and community separators, protection of environmental resources, protection of public health and safety and possible use for recreation.

NE-8 **Preservation Strategy.** The Town will utilize the development review process and other approaches that minimize on-going Town costs and liability exposure and still achieve Town open space objectives. Preference will be for retaining open space in private ownership or placement of such lands in access easements. The Town will consider the rights of landowners in implementing this strategy.

NE-9 **Open Space Use and Access.** Open space areas should be maintained in a natural state. The following criteria will be used to evaluate appropriate uses in open space areas:

a. Any recreational uses shall be limited to those areas and kinds of uses which are compatible with the preservation of natural amenities, with a minimal impact on the environment and surrounding area residences.

b. Access and use of open space areas, including types of use, parking facilities, signs, etc., should not attract users from areas outside the Town of Ross unless done in a way that is consistent with the Town's character, avoids or significantly minimizes neighborhood and user conflicts, such as noise and parking, and has minimal impact on Town services, such as increasing potential fire danger and police surveillance needs.

NE-10 **Coordination with Other Jurisdictions.** The Town's open space system will be coordinated with adjacent cities, county, Marin Municipal Water District and private open space systems.

NE-11 **Utilities in Open Space.** Utilities in open space areas shall be discouraged. When necessary, they should be located and designed to minimize harm to the area's environmental and visual quality.

NE-12 **Safety Considerations in Open Space Areas.** Safety considerations, including slope stability and seismic hazards, flooding, fire, etc. shall be considered in the design and location of any open space access, use or improvements.

NE-13 **Acquisition of Open Space by the Town.** Prior to acquisition of any open space parcels by the Town, there will be a thorough analysis of geoseismic and other hazard potential. Identified hazards may be required to be rectified prior to acceptance of the open space.

NE-14 **Potential Bald Hill Open Space Opportunities.** In coordination with the Town of San Anselmo, Marin County Open Space District and others, the Town of Ross will seek ways to secure Bald Hill as permanent open space, consistent with other Town policies, particularly concerning acquisition, access and use.

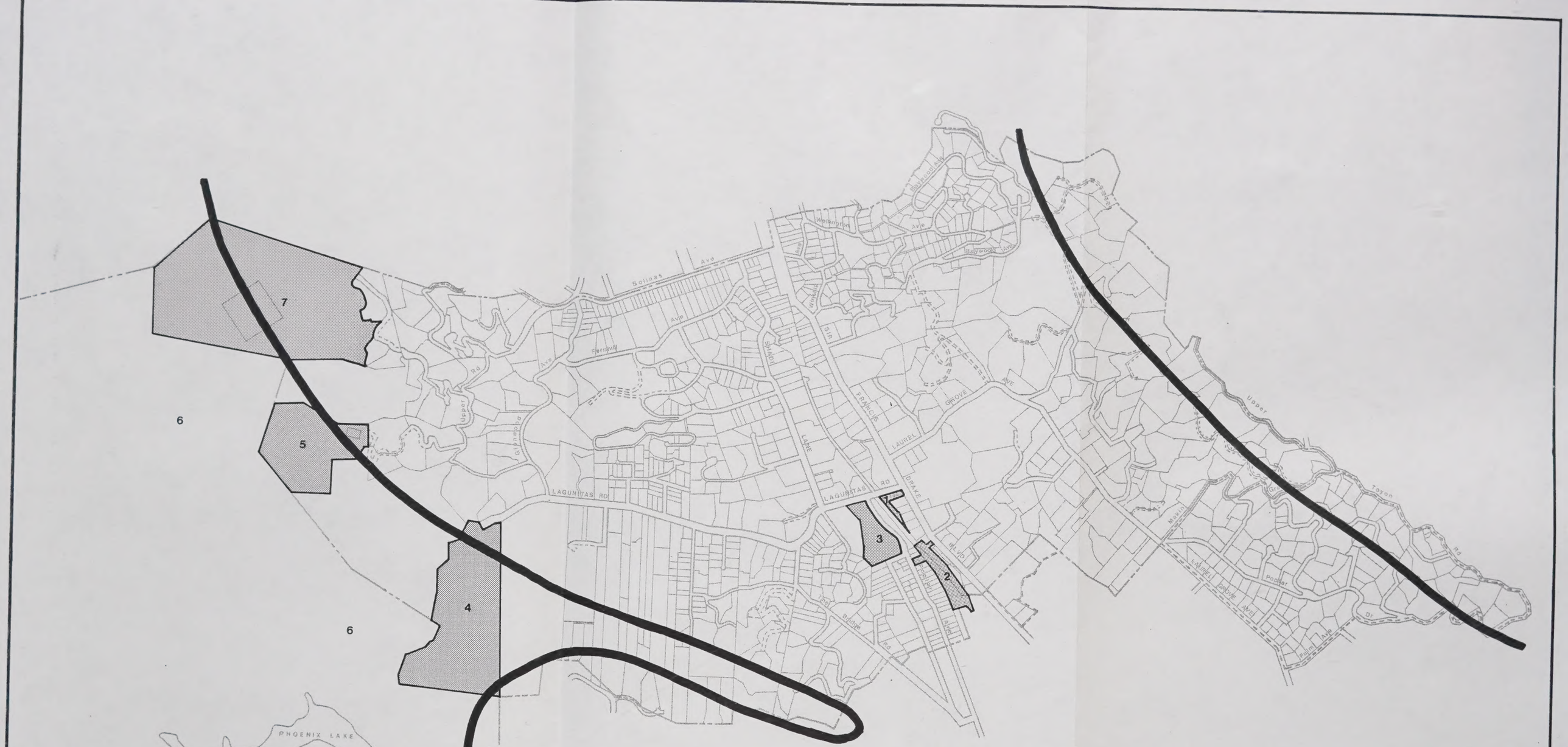
NATURAL ENVIRONMENT IMPLEMENTING ACTIONS

NE-a **Potential Bald Hill Open Space Opportunities.** The Town will seek reasonable and fiscally responsible means to preserve Bald Hill (see Policy NE-14) as permanent open space including without limitation meeting with the Marin County Open Space District and exploring joint funding with the Town of San Anselmo through its Open Space Committee and Town Council.

NE-b **Tree Ordinance.** The Town will consider the adoption of a Tree Ordinance to protect and preserve trees.

NE-c **Creek Clean-Up.** The Town will initiate creek clean-up activities through appropriate noticing and swift enforcement actions.

NE-d **Archaeological Site Protection.** If an archaeological site is uncovered during construction, activity should be halted and an examination made by a qualified archaeologist in consultation with the American Indian Council of Marin.



1 *Station Park*

2 *Frederick S. Allen Park*

3 *Ross Common*

4 *Natalie Coffin Green Park*

5 *Mudd Dedication*

6 *Marin Municipal Water District Lands*

7 *Bald Hill (Potential Open Space)*

Upland Ridge and Greenbelt Areas

Areas defined in the Marin Countywide Plan - potential acquisition by the Marin County Open Space District

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Figure 4

OPEN SPACE PLAN

N *General Plan*

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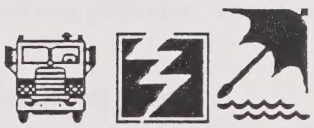
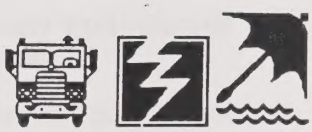
TOWN OF ROSS



HEALTH AND SAFETY GOALS, POLICIES AND IMPLEMENTING ACTIONS



HEALTH AND SAFETY GOALS, POLICIES AND IMPLEMENTING ACTIONS

INTRODUCTION

Safety and Noise Elements are required by State law to be included as part of the General Plan. Health and Safety combines these two elements to address on a comprehensive basis the issues of noise, seismic and geologic hazards, potentially hazardous materials, fire and flood hazards and emergency preparedness. A large portion of the land within the Ross planning area is subject to a variety of natural hazards. In order to protect the public, the General Plan identifies areas where hazards to life and property may occur and sets forth protective measures to reduce risk. These factors are also considered in the location, design and density of land uses in the Town.

The intent of the General Plan is to reduce the potential for injury, damage, public expense and loss of life due to natural and man-made hazards. The concept of public safety expressed in the General Plan is based on the following assumptions:

(1) Hazards are an unavoidable aspect of life. Not every degree of risk or all hazards can be eliminated.

(2) Public policy and action are appropriate to mitigate against hazards which: (a) have a high degree of risk to the general public or to a large part of the population; (b) may have relatively low risk but which would be considered disasters should the event occur; and, (c) may not have a disaster potential but which are persistent safety problems with a history of occurring in the Town.

Specific hazards or safety concerns addressed in the General Plan are described in the Safety and Noise Background sections of the plan. The information provides the basis for the goals, policies and implementing actions in this section. It is also establishes baseline data to assure consistency with the other elements of the plan. Specific issues covered include the following:

(1) **Seismicity:** The underlying fault system in the San Francisco Bay Area make it one of the most seismically active regions in the Country. Ross is about 7 miles from the "active" San Andreas Fault to the southwest, and the Hayward fault about 7 miles to the northeast. This location is well within the radius of major ground shaking from a large earthquake. Although, due to the distance from these faults, ground surface fault displacement in the Ross area is unlikely.

(2) **Geologic Stability:** Geologic stability is also a factor to be considered in land use planning. For instance, upland areas of Ross are susceptible to landslides.

(3) **Flooding:** The Town is currently reviewing plans for flood control improvements that would significantly reduce the area of flood inundation along Corte Madera Creek.

(4) **Fires:** The natural risk of fire in many areas of Ross is relatively high due to fire-prone vegetation, steep topography and climatic conditions. Fire hazards are most severe on hillside ridges and slopes.

(5) **Hazardous Materials:** In recent years, issues related to the detection of hazardous or toxic materials in soils and the disposal of hazardous materials has become a significant environmental issue. Public education, coordination with countywide hazardous materials planning efforts,

emergency response to hazardous materials spills and soils testing of historically "light industrial" sites as part of the development approval process are ways to address this issue.

(6) **Emergency Preparedness:** Emergency preparedness planning involves both government and private response to disasters. It includes responsibilities for emergency response, operating emergency shelters and the emergency broadcast system. The Town is currently updating its Disaster Plan in coordination with other agencies. In addition, the Red Cross is currently implementing a program countywide for neighborhood disaster planning.

(7) **Noise:** The Town of Ross generally has a quiet noise environment. The relatively quiet environment of the Town is one of the key qualities that make the Town of Ross an attractive place to live. Any changes in the noise environment would have a significant impact on the Town's overall quality of life. Areas exposed to high noise levels are located adjacent to Sir Francis Drake Boulevard. In addition, leafblowers and other machines have been identified at the General Plan public workshop as noise nuisance problems requiring some type of enforcement action. The purpose of this analysis, therefore, is to analyze noise conditions as a basis for the goals, policies and implementing actions necessary to maintain conditions desirable and appropriate for the community.

HEALTH AND SAFETY GOALS

HS-A MINIMIZE THE POTENTIAL FOR LOSS OF LIFE, INJURY, DAMAGE TO PROPERTY, ECONOMIC AND SOCIAL DISLOCATION AND UNUSUAL PUBLIC EXPENSE DUE TO NATURAL AND OTHER HAZARDS.

HS-B ENSURE THAT THE TOWN, ITS CITIZENS, BUSINESSES AND SERVICES ARE PREPARED FOR AN EFFECTIVE RESPONSE AND RECOVERY IN THE EVENT OF EMERGENCIES OR DISASTERS.

HS-C MAINTAIN THE OVERALL QUIET ENVIRONMENT IN THE TOWN OF ROSS AND PREVENT EXPOSURE OF RESIDENTS TO UNACCEPTABLE NOISE LEVELS

HEALTH AND SAFETY POLICIES

Geology and Soils

HS-1 **Location of Future Development.** Development should only be permitted in areas where risks to the welfare of residents can be adequately mitigated. If development is proposed in areas of geologic hazards, the development should not be endangered by nor contribute to the hazardous conditions on the site, or on adjoining properties. New development will only be approved in the areas of identified geologic hazards if the hazards can be reduced to suitable levels by appropriate mitigation measures.

HS-2 **Mitigating Hazards on Open Space Lands.** If the Town considers accepting property for such purposes as open space or park lands, the potential liability associated with geologic hazards on the lands shall be assessed by a Certified Engineering Geologist before the Town takes title.

HS-3 **Slope Stability Maps.** Development sites in slope stability Zones 1 through 3 that may be affected by landslides, in the judgement of a Certified Engineering Geologist (CEG), should be treated as Zone 4 areas. Slope stability should be assessed by a Certified Engineering Geologist during site specific investigations regardless of the slope stability zone indicated.

HS-4 **Geologic Review Procedures.** At the time a development is proposed, the Ross geologic and slope stability maps may be reviewed to gain an overview of potential geologic hazards. However, because of their general nature, these maps may be misleading and, therefore, should not be used to assess the geotechnical suitability of a site plan for development. Suitability for development should be deferred until site specific geotechnical investigations are completed.

HS-5 **Geotechnical Investigations.** The Town shall require geotechnical investigations for proposed developments. The investigations should identify the extent of geologic hazards, the suitability of a specific location for a proposed facility, the optimum location for structures and specific recommendations. The level of geotechnical investigations should comply with Town ordinances.

HS-6 **Earthquake Resistant Construction.** New buildings and additions to existing buildings should be designed and constructed according to current standards to earthquake resistant construction. The rehabilitation or elimination of structures susceptible to earthquake damage should be encouraged. The Town will continue to update its Building Code as is necessary to address current standards of earthquake safety.

HS-7 **Awareness of Geologic Hazards.** Town residents should be encouraged to become aware of the natural hazards that affect their community and ways to minimize the risk to themselves and their neighbors, such as proper control and discharge of surface and ground water, and rehabilitation of structures susceptable to earthquake damage.

HS-8 **Location of Public Improvements.** Emergency buildings and vital utilities, communication systems, streets and other public facilities should be located and designed so that they remain operational during and after a major earthquake.

HS-9 **Analysis of Landslides.** Because landslides are one of the most common and serious geologic hazards that affect the Ross planning area, landslides should be given special attention in reports prepared by geotechnical consultants. Where landslides affect a site, the consultant should include the following:

a. Describe, as a minimum, the landslide geometry, mechanics of movement, amount of movement, age of movement, failure surface, ground water conditions, cause of original movement, change in conditions since the last movement and the degree of present and anticipated future stability.

b. The landslides to be considered include not only landslides on a site, but landslides on adjacent properties that may affect a site. If it appears that a site is not affected by landslides, the consultant should make such a statement in the report.

c. The above information should be documented by existing literature and observations that may require detailed topographic and geologic mapping, interpretation of aerial photographs, subsurface exploration, sampling and laboratory testing of soil and bedrock, water table measurements, survey measurements to detect movement, slope stability analysis and the preparation of geologic sections.

Hazardous Materials

HS-10 **Potentially Hazardous Soils Conditions.** New development on sites that historically had auto-related uses, industrial uses or other land uses involving hazardous materials or sites where there is evidence of dumping of hazardous waste shall be evaluated for the presence of toxic or hazardous materials. The Town shall require subsurface contamination investigations at these sites prior to development approval.

HS-11 **Hazardous Materials Storage and Disposal.** The Town will require the proper use, storage and disposal of hazardous materials to prevent leakage, contamination, potential explosions, fires or the escape of harmful gases and to prevent individually innocuous materials from combining to form hazardous substances, especially at the time of disposal.

HS-12 **Coordination with County and State Agencies.** The Town will coordinate with government agencies and other appropriate groups in hazardous waste management and disposal as well as hazardous materials transport.

Flood Protection and Erosion

HS-13 **Flood Protection of New Development.** New construction and substantial improvement of any structure will be designed to withstand potential impacts of flooding during the "100-year" flood.

HS-14 **Flood Control Improvements.** The Town will support the construction of flood control Improvements not only consistent with the natural environment and the design character and qualities of the Town of Ross, but also consistent with safety and protection of persons and property.

HS-15 **Erosion.** In areas susceptible to erosion, appropriate control measures will be required in conjunction with proposed construction.

Fire Safety

HS-16 **Maintenance and Landscaping for Fire Safety.** Due to the high fire hazard in the steeper areas of the Town of Ross, special planting and maintenance programs to reduce potential fire hazards in the hills and wildland areas will be required where appropriate.

HS-17 **Fire Safety of New Development.** All new construction will adhere, at a minimum, to the fire safety standards contained in the Building and Fire Code and will be required to minimize fire hazards to life and property, including the use of such measures as fire-preventive site design, landscaping and building materials and the use of fire-suppression techniques and resources.

HS-18 **Access for Emergency Vehicles.** New construction shall be required to be built to provide adequate access for emergency vehicles, particularly fire-fighting equipment.

Emergency Preparedness

HS-19 **Emergency Response.** Provisions will be made to continue essential emergency public services during natural catastrophes.

HS-20 **Emergency Preparedness Planning.** Emergency preparedness planning will be undertaken in cooperation with other public agencies and appropriate public-interest organizations and current emergency plans will be publicized.

Noise

HS-21 **Land Use Compatibility Standards.** The Land Use Compatibility Standards (see chart) apply to siting and designing new or substantial remodelling uses. Where noise-generating land uses locate in an area, performance standards apply as would the requirements in the Town's Noise Ordinance. Any project which would be located in a "conditionally acceptable" or "normally unacceptable" noise exposure area, based on the land use compatibility chart standards, will be required to prepare an acoustical analysis to mitigate noise impacts. Noise-mitigation features may be required where needed.

HS-22 **Exterior Residential Use Areas.** The noise standard for exterior use areas (such as backyards and backyard patios) in residential areas is 55dB Ldn (55 decibels based on a day-night weighted 24-hour average noise level). Based on the noise anlaysis conducted for the General Plan (see the Noise Background section for further information), all areas of Ross meet this standard except for those properties located along Sir Francis Drake Boulevard. General Plan policy requires that new residential construction meet this standard. Program HS-i acknowledges the need to reduce noise impacts on existing residences along Sir Francis Drake Boulevard.

HS-23 **Interior Noise Standards.** To protect against exterior noise sources, interior standards for new residential and residential health care projects shall be 40dB Ldn for bedrooms and 45dB Ldn for other rooms. Hotels and motels shall meet a 45dB Ldn standard. In multi family projects, hotels and motels, sound transmission between units shall be as described by State Administrative Code standards, Title 25, Part 2.

HS-24 **Commercial Projects.** Design of commercial projects should minimize noise impacts on neighboring noise-sensitive uses.

HEALTH AND SAFETY IMPLEMENTING ACTIONS

HS-a **Geotechnical Review Procedures.** Evaluate and implement recommended changes to the Town's geotechnical review procedures for site-specific investigations.

HS-b **Publicize Hazardous Materials Information.** Maintain and publicize an inventory of hazardous materials and substances used by the Town and publicize ways for residents to dispose of hazardous materials.

HS-c **Use of Hazardous Materials.** Develop standards and procedures for the prudent use of pesticides at minimal levels and the use of potentially harmful materials on public lands will be done by qualified professionals only.

HS-d **Flood Control Improvements.** Continue to identify and implement flood control improvements where financially possible.

HS-e **Emergency Preparedness Planning.** Update and then publicize the Town 's emergency response plan and coordinate neighborhood disaster preparedness planning efforts through Public Safety programs and coordination with the American Red Cross, schools and other local and county agencies. The steps in updating the Town's emergency plan could include the following:

(1) designation of a disaster coordinator by Town officials to coordinate all efforts concerning the Disaster Preparedness Plan;

(2) Town refinement of the Draft Disaster Plan;

(3) coordination with the County Office of Emergency Services, local schools (Ross Elementary School, Katherine Branson School, Cedars and Ross Montessori School), churches (St. John's and St. Anselm's) and the Red Cross;

(4) complete the plan; and

(5) provide community education about the plan and neighborhood disaster response.

HS-f **Maintain Up-to-Date Building and Fire Codes.** The Town will continue updating the Building and Fire Codes as necessary to address earthquake, fire and other hazards and support programs for the identification and abatement of existing hazardous structures.

HS-g **Noise Ordinance.** Consider ways to improve the Town's Noise Ordinance which would provide quantifiable noise standards and provide for effective enforcement .

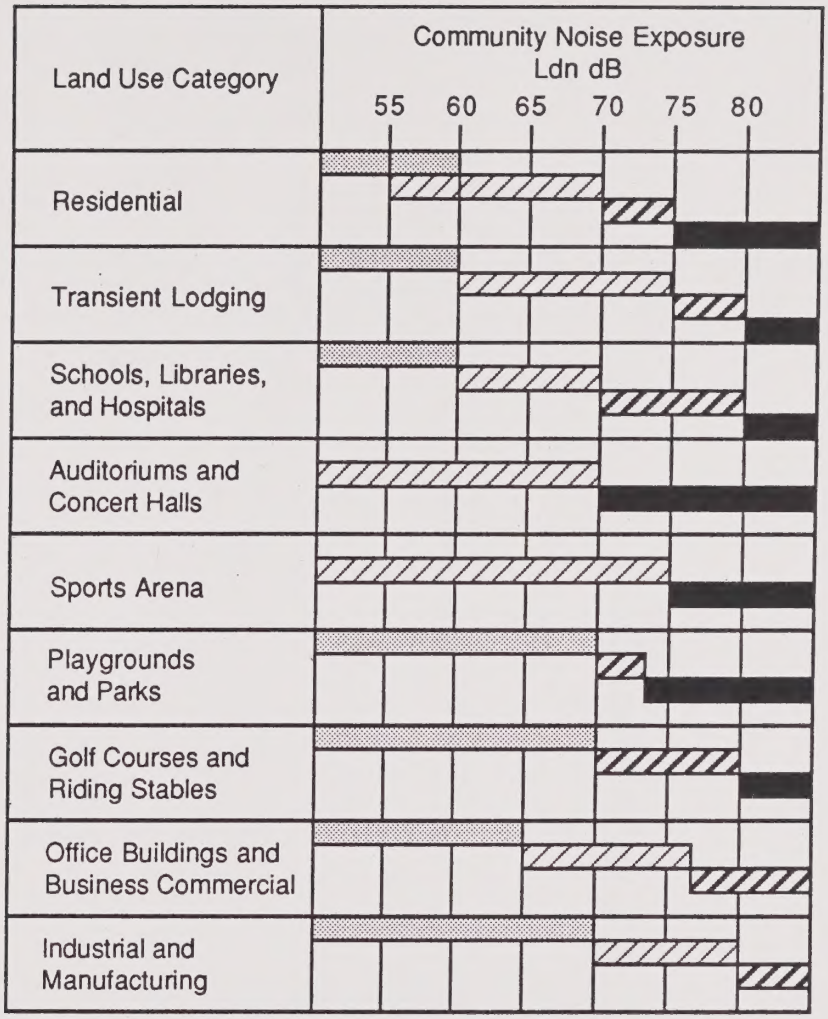
HS-h **Leafblowers and Other Mechanical Equipment.** Consider possible restrictions for leaf blowers and other noisy mechanical equipment.

HS-i **Provide Information on Noise Mitigation.** Provide information on appropriate design for fences and other noise mitigation that will reduce noise levels for first floor rooms and outdoor areas, especially for homes along Sir Francis Drake Boulevard.

HS-j **Marin Art and Garden Center.** Explore with the Marin Art and Garden Center ways to reduce parking and noise impacts on the surrounding area and actions to minimize safety hazards related to pedestrian access, building safety and the number of people attending events. Implement actions as appropriate.

HS-k **Dog Ordinance.** Consider enactment of a dog-leash and clean-up ordinance to protect the health and safety of people on the Town's streets and parks, especially children and the elderly, and to enhance the Town's ambience by maintaining clean streets and sidewalks.

Land Use Compatibility Standards



NORMALLY ACCEPTABLE
Specified land use is satifactory, based upon the assumption that any buildings involved are of normal construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE
New construction or development should be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features included in the design.

NORMALLY UNACCEPTABLE
New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in design.

CLEARLY UNACCEPTABLE
New construction or development clearly should not be undertaken.

Source: Derived from Land Use Compatibility table developed by the California Office of Noise Control

LAND USE BACKGROUND

LAND USE BACKGROUND

INTRODUCTION

The Land Use Background section describes existing and future land use, services and development trends in Ross as a basis for the goals, policies and programs in the Community Development section. In addition, the information in this section establishes a basis for planning and coordination with other jurisdictions. The specific topics covered in the Land Use Background include:

- Introduction
- State Guidelines and Requirements for Land Use Elements
- History
- Population and Employment Trends and Projections
- Existing Land Use
- Town of Ross Planning Area and Sphere of Influence
- Water Service
- Sewer Service
- Schools
- Public Safety
- Solid Waste Disposal
- Library Service
- Recreation Facilities
- Gas and Electricity
- Telephone
- Cable Television
- Hospitals
- Mosquito Abatement

STATE GUIDELINES AND REQUIREMENTS FOR LAND USE ELEMENTS

The Land Use Element has been required as part of local General Plans since 1955. The following citation from the State Government Code summarizes the intent and requirements of the Land Use Element:

> Government Code Section 65302 (a): A land use element which designates the proposed general distribution and general location and extent of uses of the land for housing, business, industry, open space, including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land. The land use element shall include a statement of the standards of population density and building intensity recommended for the various districts and other territory covered by the plan. The land use element shall also identify areas covered by the plan which are subject to flooding and shall be reviewed annually with respect to such areas.

The Land Use Element must establish a pattern for land use and set clear standards for the density of population and the intensity of development for each of the proposed land uses. The Land Use Element must also address the following issues:

(1) Hazards, such as flooding (specific hazards are discussed in the Safety Background section).

(2) Natural resources, such as water resources, vegetation, soil resources, mineral resources, fish and wildlife, rare and endangered plant and animal species.

(3) Aesthetic, cultural and recreational resources, such as parks and recreation, scenic areas, historical and cultural resources, and public access.

(4) Community development, such as population characteristics, housing, social issues, economic characteristics, streets, utilities and development design.

HISTORY

The Town of Ross is the second smallest of Marin's communities, comprising 1.6 square miles. It is a quiet residential community of former summer homes and estates hidden on tree-lined, shady streets. The Town of Ross's regional location is shown in Figure 1. The area was originally part of a 8,877-acre Mexican land grant to Juan B.R. Cooper in 1840 known as Ranch Punta de Quentin Canada de San Anselmo (Quentin Point, Valley of Saint Anselm). After operating an extensive logging business in the area, Cooper sold the land to Benjamin Buckelew. The Town was named in honor of James Ross, who purchased the land from Buckelew in 1857 for $50,000. Ross rebuilt the seven-bedroom Buckelew home near the present Town Hall and moved there with his wife and three children. The house burned in 1897.

After his death, Ross's widow Anne sold much of the land. She also donated land for the North Pacific Coast Railroad Station, which is now the site of the Ross Post Office, and a beautifully landscaped park on the north side. Mrs. Ross also donated another site near the railroad tracks for the valley's first church. This area is now a tiny park across from Town Hall. Mrs. Ross died in 1901.

The Town was incorporated in 1908. One of the first actions of the new Town Council was to make it illegal to cut down trees without Town approval. Soon the streets were paved, streetlights installed, concrete bridges built over the creek and a firehouse constructed. Land for the Ross Commons was purchased from Ross's daughter, Anne Ross Worn, in 1911. In 1927 the existing Town Hall and firehouse were built.

A large portion of Ross once belonged to Albert Dibblee. Dibblee owned 78 acres of orchards, gardens and rolling grounds plus a mansion called Fernhill. His property included all of what is now Branson School. The wealthy landowners of this era maintained beautiful estates lavishly landscaped with shrubs and plants from all over the world.

Another prominent institution in Ross is the Marin Art and Garden Center, located on Sir Francis Drake Boulevard and Laurel Grove Avenue. It is surrounded by an unusual serpentine brick wall built in memory of Caroline Livermore, the original founder. The Center was founded in 1945 with the purchase of 10 acres from A.J. Kittle, a member of the first Ross Town Council. Caroline Livermore, the president of the Marin Conservation League, wanted to save the the lovely gardens. She organized a non-profit group to buy the land and develop the Center's activities. Among the founder groups were the Marin Conservation League, The Garden Society of Marin, the Marin Garden Club, Marin Society of Artists, Ross Valley Players and Marin Music Chest.

From 1950 to 1971 the Marin County Fair was held at the Center. The Fair is now held at the Marin County Civic Center in San Rafael. The Barn, a theater used by the Ross Valley Players, has a seating capacity of 300. Across from the Art and Garden Center is Ross Town Hall. In front of it is a large statue of a bear cast in compressed marble dust, designed by the late famous sculptor, Benjamino Bufano. The bear was donated by Jerome and Peggy Flax in 1971.

POPULATION AND EMPLOYMENT TRENDS AND PROJECTIONS

Bay Area and Marin County Trends and Projections

During the 1950's and 1960's, Marin County was a growing residential suburb of San Francisco. In the mid 1970's there was an explosive growth in local employment which is continuing in the 1980's. The suburbanization of employment is a recent national phenomenon, caused by the improvement in computer and communications technologies; high central city office costs; the desire of executives to locate nearer their homes and the homes of their employees, and other reasons. In the Bay Area, new suburban job centers include Palo Alto, Walnut Creek, Concord, Santa Rosa and San Rafael. Jobs in Marin County grew

from approximately 57,600 in 1970 to 77,600 in 1980. Most of the new jobs have been concentrated in three fields: services (32% of all Marin County jobs in 1980); retail trade (25%) and finance, insurance and real estate (14%). These areas are expected to continue to dominate the local job market in the future as well.

Historical and Projected Population Growth in the San Francisco Bay Area 1960-2005

County	1960	1970	1980	1985	1995	2005
Alameda	908,209	1,073,184	1,105,379	1,191,450	1,313,450	1,414,000
Contra Costa	409,030	558,389	656,380	705,000	829,200	901,000
Marin	146,820	206,038	222,568	223,400	241,700	261,000
Napa	65,890	79,140	99,199	102,700	117,100	128,150
San Francisco	740,316	715,674	678,974	718,500	760,900	780,500
San Mateo	444,387	556,234	587,329	607,550	639,250	658,550
Santa Clara	642,315	1,064,714	1,295,071	1,380,650	1,538,400	1,612,900
Solano	134,597	169,941	235,203	270,500	363,900	435,500
Sonoma	147,375	204,885	299,681	332,200	403,600	471,800
Region Total	3,638,939	4,628,199	5,179,784	5,531,950	6,207,500	6,663,400

Source: 1980 U.S. Census; Association of Bay Area Governments "Projections '87"

Historical and Projected Job Growth in the San Francisco Bay Area 1960-2005

County	1960	1970	1980	1985	1995	2005
Alameda	353,000	459,000	511,200	559,800	692,200	776,900
Contra Costa	103,400	152,300	202,200	236,900	326,400	379,400
Marin	32,900	55,600	76,500	91,200	120,100	133,300
Napa	17,900	25,100	35,900	40,700	51,800	58,800
San Francisco	475,900	536,300	552,200	554,100	629,400	671,700
San Mateo	131,100	212,700	259,800	281,300	344,800	366,500
Santa Clara	248,000	423,900	698,700	819,600	1,013,900	1,152,600
Solano	43,300	54,900	90,700	101,600	133,200	164,300
Sonoma	46,900	65,600	103,400	119,900	161,500	190,500
Region Total	1,452,400	1,985,400	2,530,500	2,805,100	3,473,300	3,894,000

Source: 1980 U.S. Census; Association of Bay Area Governments "Projections '87"

This job growth has been mirrored by large increases in the number of employed Marin residents. The number of workers per household has increased over the last 35 years, resulting in more commute trips in the region. This has resulted in increased traffic on Highway 101 and local feeder roads. In l960, there were l.2l workers per household in Marin County; by 1980 the figure had risen to l.34 workers per household.

Currently, Marin has more working people per capita than the region, state or nation and is only slightly behind San Mateo County for having the highest labor force participation rate in the Bay Area.

Over the past twenty years the most notable change has been the increased participation of women in the labor force. From 1960 to 1980, the proportion of Marin County's women in the labor force increased from 24% to 48%. This proportion is also higher than regional and state averages.

Marin County's population growth is characterized by several important factors: (1) a limited supply of developable land has reduced the growth potential; (2) the aging of the population has resulted in fewer families with children; (3) the declining birth rate has resulted in fewer children per family; (4) a decreasing average household size has resulted in fewer people living in each housing unit; and (5) the high cost and limited availability of housing has limited the ability of many people to live in the county. These conditions are expected to continue over the next twenty years. Future projections for Marin County and the Town of Ross for population, households, persons per household, jobs, employed residents and average household income are shown below.

Marin County Projections
1980-2005

Category	1980	1985	1990	1995	2000	2005
Population	222,568	223,400	231,950	241,700	250,400	261,000
Households	88,723	92,210	97,770	103,310	107,990	113,980
Household Population	215,273	216,500	224,650	233,200	240,950	251,200
Persons/Household	2.43	2.35	2.30	2.26	2.23	2.20
Jobs	76,502	91,200	108,000	120,100	126,000	133,300
Employed Residents	118,560	127,100	136,900	146,800	153,100	159,800
Avg Household Income (1985 Dollars)	$45,258	$48,800	$51,500	$54,600	$57,500	$59,500

Source: Association of Bay Area Governments "Projections '87"

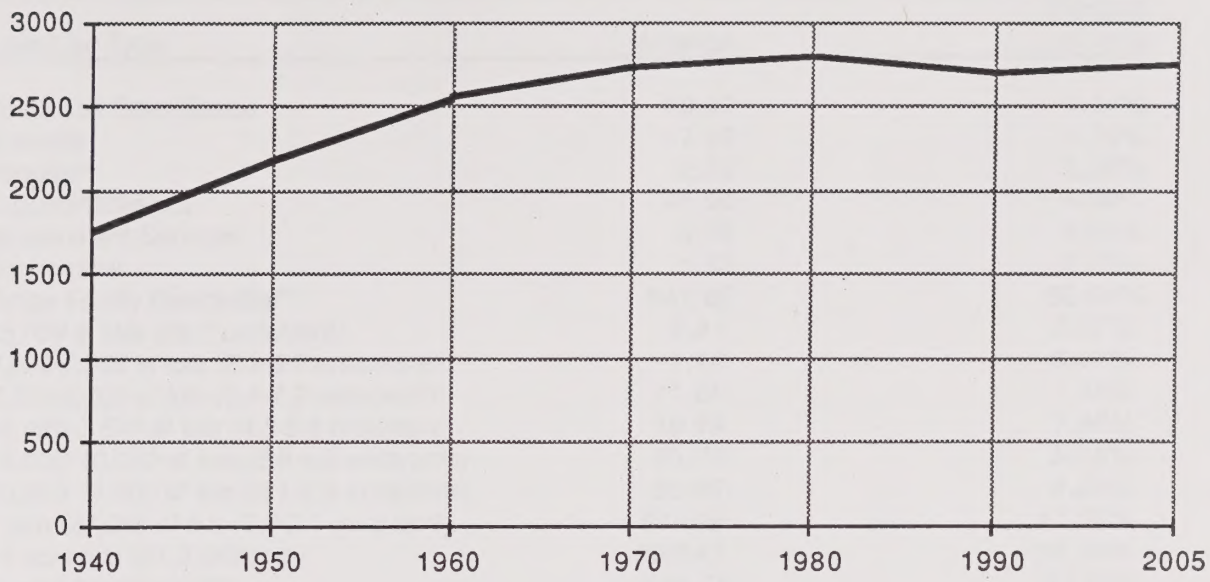
Despite a projected minimal 6% growth in population in Marin County between 1980 and 2005, the number of employed residents is expected to increase another 24%. The Town's increase in employed residents is expected to be 10% over the same period. Therefore, even though the average household size is expected to continue to decline, the number of workers per household is expected to increase -- from 1.34 in 1980 to an expected 1.39 in the year 2005. In the future, Ross and Marin as a whole are expected to have more two worker households and fewer households with children.

These changes will tend to raise the average household income in Marin County as a whole and in the Town of Ross. In constant 1980 dollars, the mean household income for the Town of Ross, which was the highest of all cities in the county in 1980, is expected to increase to $108,700 in the year 2005 (in constant 1985 dollars). The Marin County mean household income projected for the year 2005 is $10,000 higher than the projected figure for the Bay Area as a whole.

Town of Ross Trends and Projections

Population projections for the Town of Ross to the year 2005 show a decrease in population from 2,801 in 1980 to 2,750 in 2005 (a 2% decrease). However, the number of households is projected to increase from 926 in 1980 to 970 by the year 2005. This phenomenon is due to a decreasing average household size caused by fewer children being born, more divorces and a general aging of the population. The number of persons per household in Ross has steadily decreased over the past 15 years from 3.2 persons per household in 1970 to an estimated 2.8 persons per household as of January, 1987. ABAG projects that the average household size in Ross will continue to fall to 2.66 persons per household by the year 2005.

Town of Ross Population Growth Trends
1940-2005



Town of Ross Projections
1980-2005

Category	1980	1985	1990	1995	2000	2005
Population	2,801	2,750	2,700	2,700	2,750	2,750
Households	926	940	950	960	960	970
Household Population	2,701	2,650	2,600	2,600	2,600	2,550
Persons/Household	2.91	2.82	2.72	2.70	2.68	2.66
Jobs	899	900	900	1,000	1,000	1,000
Employed Residents	1,090	1,100	1,200	1,200	1,200	1,200
Avg Household Income (1985 Dollars)	$89,021	$95,600	$100,700	$104,300	$105,800	$108,700

Source: Association of Bay Area Governments "Projections '87"

EXISTING LAND USE

Existing Land Use in the Town of Ross

Existing land use within the corporate limits of the Town of Ross is shown in the table on the next page. The information corresponds to Figure 5, Existing Land Use map. Land uses outside the Town limits, but within the Town's existing Sphere of Influence, are either completely developed in a single family residential use in the Del Mesa area or under the jurisdiction of the Marin Municipal Water District. The information is summarized in the table shown later in this section for the area east of Makin Grade. The Ross General Hospital site, proposed for inclusion within the Town's Sphere of Influence, comprises a total of approximately 7 acres, of which 2 acres are currently within the Town limits.

Town of Ross Existing Land Use
1987

Land Use Type	Acreage	Percent of Total
Parks and Open Space	50.47	4.94%
Schools	17.93	1.75%
Hospital*	2.05	0.20%
Cultural/Religious	41.90	4.09%
Government Services	3.76	0.36%
Commercial	1.33	0.12%
Single Family Residential**	541.65	52.90%
≤5,000 sf lots (≥8.7 units/acre)	*0.81*	*0.07%*
6,000-5,000 sf lots (7.2-8.7 units/acre)	*1.16*	*0.11%*
7,500-6,000 sf lots (5.8-7.2 units/acre)	*11.05*	*1.08%*
10,000-7,500 sf lots (4.3-5.8 units/acre)	*19.99*	*1.95%*
15,000-10,000 sf lots (2.9-4.3 units/acre)	*53.76*	*5.26%*
20,000-15,000 sf lots (2.1-2.9 units/acre)	*33.35*	*3.26%*
1 acre-20,000 sf lots (1.0-2.1 units/acre)	*121.06*	*11.82%*
≥1 acre lots (≤1.0 unit/acre)	*300.47*	*29.34%*
Vacant Residential***	224.59	21.93%
R-1:B-10 (10,000 sf minimum lot)	*7.25*	*0.70%*
R-1:B-20 (20,000 sf minimum lot)	*0.50*	*0.04%*
R-1:B-A (1 acre minimum lot)	*216.84*	*21.17%*
Streets	140.32	13.71%
Total	1024.00	100.00%

*Includes portion of Ross General Hospital within the Town limits
**Separates existing single family residential densities by lot size and net number of units per acre
***Separates vacant residential by existing zoning category

Source: Marin County Assessor's Office; Jeffery Baird and Associates (1987)

Vacant Land

Vacant, undeveloped land in the Ross Planning Area totals approximately 224 acres (149 acres located west of Sir Francis Drake Boulevard; and 75 acres located east of Sir Francis Drake Boulevard). The amount of vacant land does not include public or restricted private open space areas or parkland because they are not available for development. There are no vacant sites in any other use, except for the parking lot used by St. Anselm's church located at the corner of Bolinas Avenue and Sir Francis Drake Boulevard.

While the total amount of vacant land zoned for residential use may seem large, 52% of this amount is contained in three major land holdings adjacent-to or part-of Bald Hill. Additionally, almost all of the remaining vacant land is located on steeply sloping hillside areas, with limited residential development potential based on site or area constraints. There are very few vacant parcels located in the flatter portions of the Town. The total development capacity within the Town of Ross amounts to between 48 and 80 additional homes. This is based on site constraints, Town development requirements and available land. It is entirely possible that the Town could be completely "built out" by the year 2005.

Land Use Intensities

The land use designations in the Land Use Plan (Figure 3) are intended to preserve the existing character and qualities of the Town of Ross. Land use designations appropriate for a Land Use Plan in a general plan are based on many factors including: existing and surrounding land uses; protection of the historic low-density character of the community; protection of natural resources; access and street capacity; parking

requirements and needs; noise levels, site topography (slope), geologic and seismic hazards; scenic qualities and views, and other factors. Figure 5 shows the existing land use in Ross.

To convert residential units to population, 2.7 persons per household is assumed based on the ABAG Projections '87 report. In 1987, there were 2.8 persons per household and the trend toward smaller households is expected to continue. It is projected by the Association of Bay Area Governments that the Town's average household size in the year 2005 will be 2.66 persons.

At the community workshop on the General Plan some concern has been expressed about the variance process and the potential for overbuilding existing lots in the Town, especially smaller lots. This issue is related to the General Plan update in that zoning must be consistent with the General Plan's land use designations. Follow-up implementing actions that would come out of the General Plan update include any subsequent rezoning where necessary so that the two are consistent. In addition, the General Plan update provides an opportunity to review the Town's existing zoning as it pertains to implementing the goals and policies of the General Plan. Problems in implementing zoning identify possible areas where Town policy needs to be established or refined.

Use permits and variance actions are basic mechanisms within the zoning ordinance. Use permits provide a method for reviewing uses, activities and situations which have been determined as being potentially detrimental to the neighborhood or the Town in general. The use permit procedure allows the Town to evaluate a use, activity or situation based on the specific circumstances of an individual case, to deny the use permit if detriment is apparent or to condition a use, activity or situation in any manner deemed necessary to reasonably insure that detrimental circumstances are precluded. The use permit requirement is imposed on uses, activities and situations which are deemed appropriate in a given zoning district, but, only after careful review.

Variances are critical to the equitable application of zoning provisions. Equitability is the very basis upon which zoning rests. Variances granted without the existence of clear and definite special circumstances constitute the granting of a special privilege. Such actions reduce or eliminate the effectiveness of the zoning provisions and are unfair to those other members of the community who are subject to the same requirements. The General Plan identifies as a program a study of the Town's existing variance procedures. By analyzing the Zoning Ordinance provisions, it can be adjusted to meet the changing demands of the community or to preserve the qualities of the community that people want to save. Zoning provisions setting forth spatial limitations (setbacks, height, coverage, accessory building, etc.) are established for health, safety, peace, morals and comfort purposes, but as a secondary effect also act as a major element in structuring community appearance and character.

Commercial zoning in Ross establishes a maximum building height of 30-feet and requires that 1 off-street parking space be provided for every 250 square feet of net rentable floor area. Another useful way of looking at development intensities is with the use of floor area ratios (FAR). The FAR is the gross square footage of the building divided by the square footage of the lot. Commercial intensities in the downtown area range from a floor area ratio (FAR) of 0.3 to 1.33. Generally, retail uses convert to about 1 job for every 500 square feet of floor area; and office/service uses convert to about 1 job per 300 feet of floor area.

TOWN OF ROSS PLANNING AREA AND SPHERE OF INFLUENCE

General Description of the Planning Area

The Town of Ross lies within the "City-Centered Corridor", as defined by the Marin Countywide Plan. The "City-Centered Corridor" is designated to contain more urban, densely populated development than the "Inland-Rural Corridor" and "Coastal Corridor" areas of the County. This is consistent with the Association of Bay Area Governments' Regional Plan for the entire Bay Area, which is committed to a city-centered concept of development. The city-centered concept was adopted about 15 years ago to promote compact growth for reasons of cost-efficiency in public services and to retain open space resources as community separators.

The Town of Ross Planning Area covers the corporate limits of the Town of Ross, a small area developed under county jurisdiction north and west of Laurel Grove Avenue, between Makin Grade and Wolfe Grade, and the area surrounding Phoenix Lake administered by the Marin Municipal Water District. The Town's Planning Area is shown in Figure 2. The Ross General Plan proposes the addition of the rest of the existing

Ross General Hospital site and other areas west of Toussin Avenue as part of the Town's Sphere of Influence, with future annexation possible.

Included in the Ross Planning Area is the Ross Sphere of Influence as defined by the Marin County Local Agency Formation Commission (LAFCO). LAFCO's Board must approve annexation and public agency reorganization requests. Their purpose is to promote logical and orderly development and coordination of local governmental agencies to provide for the present and future needs of the county and its communities. To accomplish this purpose, LAFCO has adopted Spheres of Influence (SOI) for each local governmental agency within the county. Subsequent annexation or reorganization requests must be consistent with these policies. The Sphere of Influence is the area for the probable ultimate physical boundaries and service area of a local governmental agency, as defined in the California Government Code (§54774). Within the Sphere of Influence, Urban Service Areas (USA) may also be designated to identify how growth and the extension of services will be phased within the ultimate service area boundary. The Urban Service Area for the Town of Ross is co-terminus with the Town's existing corporate limits.

In addition to the Town of Ross, which is a general purpose governmental entity providing a variety of services, there are a number of single purpose districts delivering specialized services, such as sewer, water, schools, etc. Surrounding cities include the Town of San Anselmo to the west and the City of San Rafael to the north. The unincorporated area of Kentfield is located to the east of the Town. The Marin County Board of Supervisors recently adopted a community plan for the Kentfield/Greenbrae area (the Kentfield/Greenbrae Community Plan) that covers land adjacent to the Town limits. That area is also represented by the Kentfield Planning Advisory Board. It should also be noted that both the City of San Rafael and the Town of San Anselmo are currently in the process of revising their general plans.

Specific Areas in the Sphere of Influence

Ross General Hospital Site

LAFCO staff is currently working on a study of the Ross Sphere of Influence. Currently, two acres of the seven-acre site are located in the Town of Ross. The remaining five acres is under the jurisdiction of the County of Marin. The preliminary findings of the LAFCO study are that the entire Ross General Hospital site should be added to the Town of Ross Sphere of Influence and eventually annexed to the Town of Ross. This may be appropriate for several reasons: (1) the site is currently within two different jurisdictions; (2) the site may be redeveloped at some time in the near future; and (3) the Town may want to have discretionary approval over what occurs on the site. There are other factors to be considered against the annexation, however, such as the provision for and cost of providing adequate services to the entire site. Formal review by LAFCO is required to add the site to the Sphere of Influence and then for annexation. Both actions also require approval of the Ross Town Council.

The Kentfield/Greenbrae Community Plan resulted in the redesignation of the Ross General Hospital site from OP (Planned Office) to RMP-20 (Residential, Multiple Planned 20 units per acre). The new zoning designation allows continued use of the property for the hospital and other hospital related uses, but would change the potential for redevelopment of the hospital site from office use to multiple family use, which is more consistent with the goals of the Kentfield/Greenbrae Community Plan. Policy language in the Kentfield/Greenbrae Community Plan is quoted below and is consistent with the Ross General Plan:

> The Ross Hospital property should be rezoned from OP to a maximum density of RMP-20 with a final density to be established after complete analysis of site constraints and compliance with the development standards of this plan. Any reuse of the site for institutional use shall not increase traffic above its current level, and provision of adequate parking must be ensured. The proximity of this site to bus stops, the Art and Garden Center, and other cultural/recreational amenities suggests that an ideal reuse would be housing for low and moderate income seniors, a type of housing greatly needed within the Kentfield/Greenbrae community. The 31 unit apartment building included in the hospital's ownership provides needed housing in the area and this use should be continued.

When in operation, the hospital had a total of 339 employees (as of January, 1987). On an average day about 164 of the employees worked at the hospital. Generally, hospitals are a much more intense use than residential uses. Below, for illustration purposes, is a summary of possible traffic generation from this property under three different land uses.

Summary of Possible Traffic Generation at the Ross General Hospital Site

Use	Maximum Use	Trip Rate*	Total Daily Trips Possible
Existing Hospital	121 beds	11.4/bed	1,380 trips
Residential (@ 20 units/acre)	140 units	7/unit	980 trips (400 trips less)
Senior Residential	140 units	3/unit	420 trips (960 trips less)

*Source: Wilbur Smith and Associates (1987)

Area Between Makin Grade and Wolfe Grade

The area within the Sphere of Influence between Makin Grade and Wolfe Grade is entirely developed. Existing land use in the area is shown in the table below. The Town of Ross General Plan land use designations are consistent with the existing land use and zoning in this area.

Existing Land Use Within the Town of Ross Sphere of Influence* 1987

Land Use Type	Acreage	Percent of Total
Single Family Residential	68.47	86.16%
≤5,000 sf lots (≥8.7 units/acre)	*0.00*	*0.00%*
6,000-5,000 sf lots (7.2-8.7 units/acre)	*0.00*	*0.00%*
7,500-6,000 sf lots (5.8-7.2 units/acre)	*0.47*	*0.59%*
10,000-7,500 sf lots (4.3-5.8 units/acre)	*0.72*	*0.91%*
15,000-10,000 sf lots (2.9-4.3 units/acre)	*7.65*	*9.56%*
20,000-15,000 sf lots (2.1-2.9 units/acre)	*8.27*	*10.41%*
1 acre-20,000 sf lots (1.0-2.1 units/acre)	*33.35*	*41.96%*
≥1 acre lots (≤1.0 unit/acre)	*18.01*	*22.66%*
Streets	11.00	13.84%
Total	78.47	100.00%

*Includes only the area east of Makin Grade; does not include Ross General Hospital site

Source: Marin County Assessor's Office; Jeffery Baird and Associates (1987)

If annexation of this area to the Town of Ross occurs, consideration should be given to readjusting the City of San Rafael boundary so that it runs along Upper Toyon Drive. Currently, there are approximately 16 lots that are under split-jurisdiction. Problems can occur in providing emergency services and comprehensive land development policies due to this situation. It is also noteworthy that property addresses in the area are generally random in regard to whether they have a Ross, San Rafael or Kentfield address. Development of the Felton/Oakwood subdivision in San Rafael resulted in realignment of the Ross-San Rafael boundary so that it now follows Upper Toyon Drive/Clorinda Drive.

Marin Municipal Water District Lands

Marin Municipal Water District lands are adjacent to the westerly Town limits. This area is in public ownership and designated as "Public Park/Open Space" on the Ross General Plan.

Land Uses Surrounding the Town of Ross

Town of San Anselmo

The Town of San Anselmo is currently updating portions of its General Plan. Existing land uses, zoning and land use designations shown on the current San Anselmo Land Use Plan, adopted in 1976, are generally compatible with the uses on the Ross Land Use Plan. The San Anselmo General Plan shows the areas along Bolinas Avenue as "general commercial" adjacent to Sir Francis Drake Boulevard, "mixed residential" (predominantly single family at 6-12 units/acre), lands of the San Francisco Theological Seminary (designated "conservation" at 1 unit/acre or less), and "single family" (4-6 units/acre). Properties adjacent to Mt. Baldy are designated "conservation". Areas adjacent to the Wellington and Baywood areas are designated "single family" in the flatter areas and "conservation" in the steeper areas.

Future issues in San Anselmo related to the Town of Ross include: (1) review and comment on revisions to the San Anselmo General Plan; (2) joint exploration of potential acquisition of Bald Hill and surrounding properties; and (3) possible master planning changes for the San Francisco Theological Seminary campus and off-campus housing.

City of San Rafael

The City of San Rafael is currently undergoing a complete revision of its General Plan. Approval of the revised Plan is expected to occur by mid-1988. Proposed land use designations along Upper Toyon Drive are for "park/open space", "hillside residential" (0.5-2.0 units/acre), and "hillside resource residential" (0.1 to 0.5 units/acre). These designations are compatible with those in the Ross General Plan. As discussed above, annexation of the area between Makin Grade and Wolfe Grade should consider readjustment of the San Rafael City boundary.

Kentfield

The Kentfield/Greenbrae Community Plan provides detailed land use/zoning designations for properties along Sir Francis Drake Boulevard. The Ross General Hospital site has been rezoned from office to RMP-20 (multiple family residential at 20 units/acre), as discussed above. Properties on the south side of Sir Francis Drake are zoned RMP-30 (30 units/acre), consistent with the existing convalescent hospital and multiple family residences, which range in density from 22 to 40 units/acre.

Properties along Poplar and Bridge are zoned R-1:B-1 and R-1:B-2, respectively. These designations are generally compatible with adjacent land use designations and existing land use in Ross. Lots in Kent Woodlands are zoned for 1-acre to 2-acre minimum lot size.

WATER SERVICE

Marin Municipal Water District, a public utility governed by an elected Board, provides water service to all eastern Marin Cities south of Novato. San Geronimo Valley and Hamilton Air Force Base are also included in the District. The total population in the District in l980 was 165,000, of which the Town of Ross comprised less than 2% . District facilities include six area reservoirs, two water treatment plants, storage tanks, pumps and lines. The District uses Countywide Plan population projections to develop their overall capital improvement needs and system plans.

The primary source of water for the district is rainfall stored in area reservoirs, although the District also maintains a limited line intertie with the North Marin Water District for Russian River water. Although, the Russian River allocation provides only 5-10% of the total water supply. Area rainfall water sources are finite because of water reservoir storage capacity. The total current capacity of the Water District is 80,000 acre feet, with an operational yield of 35,000 acre feet annually. The operational yield is based on the 1970's two and a half year drought, which is the drought of record. The operational yield is the amount of capacity which

can be used in any one year and retain adequate capacity to allow for drought conditions. In the 1970's, the District's operational yield was only 21,000 acre feet. Since that time, the Soulejule reservoir has been constructed and storage has been increased at Kent Reservoir.

Total 1986 total water consumption was 32,300 acre feet per year, an all time high. The 1987 demand increased to 32,800 acre feet. In 1976 and 1977, water consumption dropped dramatically due to drought conditions. Annual water use remained lower than 1975 levels for several years due to individual and other conservation efforts instilled by the drought. However, since 1981, use has risen about 3% per year according to the District. In 1986, residential uses consumed 24,860 acre feet of water (77% of total water consumption) and commercial/industrial use totalled 7,440 acre feet (23% of usage). The 1986 data demonstrate that conservation techniques have not been maintained. Marin County residents now use 113 gallons per person per day for indoor use compared to 77-92 gallons per person per day national average for non-conserving homes.

Water District research has concluded that water conservation techniques must reduce total water use 15% (4,800 acre feet) over the next five years or the District will need to search for new water sources to serve existing and new development. The District estimates that if water conservation efforts are successful it can save up to $25 million over the next 15 years by eliminating the need for system improvements and additional water supply construction. Even if a 15% reduction is not achieved, water conservation efforts could reduce the amount of additional supply and improvements needed.

To achieve the goal of a 15% reduction in water use, the District has commenced a long-term conservation campaign to encourage major water users and individuals to reduce water consumption. In 1986, Marin Municipal Water District established certain water conservation requirements for new connections or increased service size. These requirements cover installation of interior water saving devices, such as low-flow shower heads and toilets, pressure reduction valves and outdoor water-saving techniques. For example, new landscape plans for outdoor areas over 5,000 square feet must meet requirements for maximum turf area, low-water use plants and irrigation system design.

The most likely source for new water supply is the Russian River. However, this would require very significant transmission system improvements and negotiations with the Sonoma County Water Agency and State Water Resources Board. Sonoma County Water Agency staff indicate there may be adequate water supplies to sell water to Southern Marin in the future, particularly if the groundwater basins they are starting to explore provide good yields, which would increase the reliability of the system in dry years. If groundwater basins do not provide a significant source, the Agency would be much less likely to support a sale of water rights to Southern Marin. The Agency currently has supplies for planned Sonoma-Northern Marin growth to the year 2010 to 2020.

Capacity for seasonal peak demand also poses distribution system problems to the District. Water consumption nearly doubles in the summertime. The increased demand for water in the summertime, particularly during peak use hours of the day, places a strain on the system's delivery capacity. District records estimate that 50% of summertime use is irrigation (outdoor watering) and much of that is wasted in overwatering, overspraying and in inefficient systems. Conservation efforts would help distribution problems. District staff is currently considering a possible tiered rate structure for high water users.

There are hillside areas in Ross where the distribution system and water pressure is inadequate to serve additional development. The primary area affected are the Bald Hill parcels. The existing 22,000 gallon tank in the Bald Hill area can serve development to MMWD standards between the 260 to 430-foot elevation, however, a 50,000 gallon tank would be needed to serve additional development in that area. Figure 11 shows water flow and storage tanks in Ross.

SEWER

Sewage treatment is handled through the Ross Valley Sanitary District No. 1 by the Central Marin Sanitation Agency (CMSA). Ross Valley Sanitary District No. 1 currently provides services for sewage collection, transportation, pumping and treatment. The District also regulates Marin Sanitary Service for garbage collection in unincorporated areas. The Central Marin Sanitation Agency serves the southern half of San Rafael and the Ross Valley -- which includes essentially all of Corte Madera, Larkspur, Greenbrae, Ross, San Anselmo and Fairfax. The Agency owns and operates the sewage treatment plant which provides modified

secondary treatment, a deep water sewer outfall line, and three interceptor lines -- to San Rafael, Larkspur and San Quentin. The Agency served a population of approximately 93,000 in l980, and is expected to serve a resident population of 97,982 in the design year of 2001. Of this total, 62,959 (64%) is projected from the Ross Valley. A minimal increase is projected from the Town of Ross.

Sewage treatment capacity is defined by both dry weather and wet weather flows. The Central Marin Plant, which opened in January, 1985, was designed for an average dry weather treatment capacity of 10 million gallons per day. Average dry weather capacity typically defines biological treatment limits. However, because of the safety factors used in the CMSA plant design and the unique characteristics of the plant to handle wet weather flows, Agency staff state that considerably greater flows could be treated without the loss of biological treatment. The 1985 dry weather flows for September and October, after all systems were connected, was approximately 7.7 mgd.

Wet weather capacity is the maximum amount of dilute sewage which can be treated and pumped through the plant. The treatment plant's wet weather hydraulic capacity is 125 million gallons per day, of which 50 mgd was designed for San Rafael, and 75 mgd for the Ross Valley. The wet weather flow rate design is more than l2 times the dry weather flow, a very high ratio for sewage treatment systems. All growth from the service area can be accommodated by the current plant.

SCHOOLS

There are four schools in Ross serving very different ages and populations. Ross Elementary School is a public school serving grades K-8. The School District boundary includes part of the Del Mesa area outside the Town limits, but within the Town's Sphere of Influence, as well as most of the Town of Ross. The only area excluded are several lots located on Ross Hill which have access through Kent Woodlands. Enrollment at Ross Elementary School has declined from a high of approximately 500 students ten years ago to a current enrollment of approximately 300 students. That number has stabilized in recent years and is projected to remain at that level for the foreseeable future by District staff. Countywide population projections have shown a general decline in school-age children up through 1985, however, the number of school-age children county-wide is expected to remain about the same as it now through to the year 2005.

Public high school students attend Redwood High School in Larkspur, one of three high schools in the Tamalpais Union High School District. The district enrollment declined from 6,177 in 1972 to 1,350 in 1987-88. Future projections for Redwood show a decline in enrollment over the next three years, to 1,193 students in 1988-89, 1,103 students in 1989-90 and 1,068 students in 1990-91. Thereafter enrollment is expected to level off to 1,107 students in 1991-92. The decline in enrollment could result in the readjustment of school boundary lines and/or closure of one of the three high schools in the district.

Three private schools are located in Ross. They include: (1) The Branson School, serving grades 9-12, with a Town-restricted enrollment of 320 students; (2) Ross Montessori School, serving ages 2-6 years, with a capacity of 29 students; and (3) Cedars Home for Developmentally Disabled, serving 101 residents, 20 of which are children ages 14-21.

PUBLIC SAFETY

The Public Safety Department of the Town of Ross provides both police and fire services. There currently are 10 personnel, with three of those being strictly for fire duty. The Town has two fire engines, one first line and the other reserve. The Town also owns two houses and one apartment which provide housing for safety personnel. All homes, except for four homes located on Ross Hill, served through Kent Woodlands, are within an adequate emergency response time for Public Safety personnel. Anticipated development in the Town is not expected to require additional personnel, although annexation of areas within the Sphere of Influence should be evaluated for potential impacts on Public Safety personnel requirements.

SOLID WASTE DISPOSAL

The Town of Ross is served by Marin Sanitary Service, which has a franchise contract with the Town through to the year 2000. Marin Sanitary Service also serves Larkspur, San Rafael, Las Gallinas Valley Sanitary District

and Ross Valley Sanitary District. While Marin Sanitary Service provides twice a year free rubbish collection at a central location in Larkspur, this service is not provided in Ross or San Rafael. San Anselmo and Fairfax are provided this service with San Anselmo Garbage Disposal and Fairfax Garbage Disposal, respectively.

Marin County is in the process of revising its Solid Waste Management Plan to address waste generation within the 1985-2005 planning period. The revised plan quantifies and projects the amount of waste generated in Marin County as well as the projected capacity of existing landfills. The principal landfill for solid waste generated in the Ross Valley is Redwood Sanitary Landfill located north of Novato. The projected life of this facility is estimated at ten to twenty years, but could be less if recycling goals are not met or if Redwood is not successful in securing non-local permits for expansion plans.

LIBRARY SERVICE

Residents of Ross are served by the County library system. The most convenient system branch is a spacious facility in Corte Madera. There are other county branches at the Civic Center and in Fairfax. Ross residents can also obtain cards at the San Rafael, San Anselmo and Larkspur city libraries at little or no charge. The 80,000 book library at the College of Marin is also available for public use.

RECREATION FACILITIES

The Ross Planning Area is well located for relatively quick access to major park and recreation areas in the county, including: Point Reyes National Seashore, Muir Woods National Monument, Samuel P. Taylor Park and Mount Tamalpais. Also nearby are county parks and watershed lands and the College of Marin, located in Kentfield. The College of Marin has tennis courts and a track available to the public when not in use by students. The swimming pool is also open for a nominal fee during limited hours in the summer months.

The Mt. Tamalpais watershed holds a special significance for Marin County as a whole and the Town of Ross because of its scenic beauty and public access and use. Recreation through the Phoenix Lake area provides a link between the community and its wilderness. Adjoining national park lands, state park lands, Marin County Open Space District lands and Town open space and parkland, the watershed is a portion of a large publicly-owned and protected area. A network of trails allows access to secluded picnic areas, panoramic vistas or fishing areas.

Recreation facilities available for Ross residents in the Town of Ross include: two Town tennis courts and paddle tennis court in the Frederick S. Allen Park; Ross Common; Ross Elementary School, with playground facilities for both school-age and pre-school children; and the Natalie Coffin Green/Phoenix Lake area, which is well-used by non-residents as well. In addition,a pedestrian/bicycle path along Corte Madera Creek connects the Ross Common area through the College of Marin campus to Bon Air Road, and from the east end of South Elisio Drive (behind the Bon Air Center) to the Larkspur Ferry Terminal and Larkspur Landing. The path is well-used by both adults and children. Bicycling and walking throughout the Town of Ross also provides recreation for many Ross residents. Additional discussion of bicycle and walking trails is located in the Circulation Background section. Private recreation facilities in Ross include Pixie Park, a pre-school play lot located at the Marin Art and Garden Center, the Lagunitas Tennis Club and facilities at Branson School.

A 1982 Statewide Recreational Needs survey and 1977 Countywide Recreational Facilities Needs survey offer additional insight on recreation needs. The 1982 State Department of Parks and Recreation report, "Recreational Needs in California," contains several conclusions important for recreation planning. The survey found that desires for new or additional recreation opportunities are clearly directed toward outdoor, nature oriented activities such as fishing and hiking. The top three existing activities: jogging, bicycling and field sports will continue to show the greatest actual growth in participation-days. However, because the population is aging, strenuous activities which experienced tremendous growth in the 1960's, will grow at a rate somewhat less than the population growth rate. Several activities, particularly off-highway vehicle use, are not projected to increase at all despite population growth. Growth of "visiting historical and cultural sites" is expected to grow much faster than population growth.

The 1977 Countywide Recreational Facilities Needs Survey identified recreation needs for the Upper Ross Valley area of the county. More and better bicycle trails for both pleasure and transportation were the number one need expressed by residents of the Upper Ross Valley, with more than 70% of respondents feeling they

were needed. More swimming classes and better hiking trails were the next most expressed needs. Discussion at the workshop on the Ross General Plan, however, found that residents of Ross are fairly satisfied with recreation opportunities available.

GAS AND ELECTRIC

Pacific Gas and Electric (PG&E) representatives foresee no problems or limitations in providing service to the Ross Planning Area. As new growth occurs in the Town, PG&E will make additional arrangements to insure delivery of gas and electricity. Although it is more difficult, and thus more expensive, to supply power to certain sites, such as buildings on steeply sloping hillsides, it is PG&E's policy to not to refuse service to any existing or future developments that are approved by the Town. Developers typically pay for needed site improvements, which are required to be underground. Existing electric distribution lines can placed underground in Ross as funds are available. Payment for underground distribution lines can be provided by PG&E if matching funds are provided by the customer.

TELEPHONE

Pacific Telephone representatives indicate that there will be no problem in providing continued telephone service to the Ross area. Since telephone service is already provided in all areas of the Town, only limited additional service will be necessary. It is Pacific Telephone's policy not to place any new transmission poles or lines in or above a secured open space area. Any existing poles or lines in open space areas were installed prior to the establishment of the open space area.

CABLE TELEVISION

Viacom Cable provides service for the Ross Planning Area. There are no foreseeable problems or limitations in providing service to the Ross Planning Area.

HOSPITALS

For purposes of health facility planning, the Office of Statewide Health Planning and Development divides the State of California into fourteen (l4) geographic Health Service Areas (HSA's). Each HSA is in turn divided into Health Facility Planning Areas (HFPA's). The Ross Planning Area is in the Marin County HFPA , where there are currently four general acute care hospitals with a total of 623 licensed beds.

The most recent statistical update of the Statewide Health Facilities and Services Plan (September 20, 1985) defines the shortage (need) or excess of acute care hospital beds through the year l990 based on the current inventory of licensed beds. This plan indicates that Marin County has a significant excess of acute care hospital beds.

In addition to the short term excess of beds, there are two additional trends which reduce future needs. One is the trend toward shorter hospital stays, as there are significant pressures on hospitals to discharge patients earlier. Second, use of outpatient facilities and other reasons have meant fewer patients are being admitted to hospitals. Between 1983 and 1985, total numbers of patients declined 13% while total patient days dropped l6%. Specific information on hospitals in the area is discussed below.

Marin General Hospital: Marin General Hospital is a Public District Hospital providing the most sophisticated array of services of all providers in Marin County. In September, 1985 the hospital received approval to commence construction of a 100,000 square foot addition that will contain a surgical suite, beds and an intensive care unit. The addition is now under construction.

Ross General Hospital: Until it closed in February, 1988 Ross General Hospital was the only investor-owned acute general hospital in Marin County . It was originally developed by private physician interests. The Ross General Hospital site was recently sold and a proposal to redevelop the site is anticipated in the near future.

MOSQUITO ABATEMENT

The Marin-Sonoma Mosquito Abatement District provides mosquito and vector control throughout Marin and Sonoma counties.

CIRCULATIONBACKGROUND

CIRCULATION BACKGROUND

CIRCULATION BACKGROUND

INTRODUCTION

The background information in this portion of the plan deals with circulation, which is the movement of people and goods through and within the Ross planning area. Below is a summary of the basic functions of the analysis in the General Plan:

(1) To provide a comprehensive view of the travel needs through and within the Ross area of the general public, commercial vehicles and service and emergency vehicles.

(2) To set forth a plan for meeting those needs.

(3) To express community objectives of the desired level of mobility, willingness to pay for mobility, and priorities for allocation of public resources among competing transportation demands.

(4) To address specific problems, such as congestion, emergency vehicle access problems, traffic impacts on neighborhoods, costs of maintenance and repair of public streets, etc.

Maintaining acceptable traffic operating conditions is both a local and regional problem. Conditions in the Town of Ross are affected by development and travel patterns throughout the entire Ross Valley since Sir Francis Drake Boulevard, the major arterial passing through the Town, is a primary east-west route connecting Ross Valley communities with Highway 101 and West Marin. In a larger scale, conditions on Highway 101 are affected by changes throughout the entire corridor, including San Francisco, Marin and Sonoma Counties.

Peak traffic periods, either in the morning or the evening, are the times of day when traffic operations are at their worst. The traffic analysis focuses on those times of day to assure that "worst time" situations are adequately analyzed and addressed in the General Plan. The land uses in the Town which are the primary traffic generators during the peak traffic periods are predominantly residential units, with a small local retail commercial area.

In order to adequately address these issues, the Town authorized a study of traffic conditions by Wilbur Smith & Associates in May, 1987 as part of the General Plan update. The purpose of the study was to both provide documentation and future traffic forecasts to be incorporated into the Town's General Plan and to provide an analysis of existing and potential future traffic related problems within the Town. Possible solutions were also analyzed. Together, these analyses provide a foundation for the goals, policies and implementing actions described in the General Plan. Specific topics covered in this section include:

- Introduction
- State Guidelines and Requirements for Circulation Elements
- Traffic System Classification
- Levels of Service
- Existing Roadways
- Existing Traffic Conditions
- Traffic Forecasts
- Alternative Improvements to Lessen Future Impacts
- Summary of Traffic Conditions
- Highway 101 Corridor Improvements
- Public Transit Service
- Parking Needs
- Bicycle and Pedestrian Circulation

STATE GUIDELINES AND REQUIREMENTS FOR CIRCULATION ELEMENTS

A Circulation Element has also been required as part of local general plans since 1955. Guidelines adopted by the State Office of Planning and Research emphasize the need to develop a ". . . balanced, multimodal transportation system". Cost efficiency and protection of environmental quality require attention to non-auto transportation facilities and careful coordination with the Land Use Element. The following citation from the State Government Code summarizes the intent:

> Government Code Section 65302 (b): A circulation element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the land use element of the plan.

TRAFFIC SYSTEM CLASSIFICATION

The Town's street system is composed of a hierarchy of streets which serve different functions in the collection and movement of traffic. Due to physical constraints within the Ross Valley, such as open space and ridgeline areas, development has occurred as a series of communities strung along Sir Francis Drake Boulevard. The Town's street system generally serves as a network to collect and transport traffic to Sir Francis Drake Boulevard, the only arterial street in the planning area. Some of the collector streets, Shady Lane, Ross Common and Poplar Avenue, provide parallel roads to Sir Francis Drake Boulevard and create the potential for future diversions during peak congestion times.

Street capacity and travel speed generally increase as one moves from minor local streets to collectors and arterials. With the exception of Sir Francis Drake Boulevard, the Ross planning area street system is designed for, and is suitable only to provide access to local sites and developments. Steep slopes and rough terrain prevent through traffic ways construction from the area to the east and west. Hillside streets in Ross have significant capacity constraints due to narrow pavement width and short sight distance. Below is a general definition of the types of streets found within the planning area:

Arterial Streets: Sir Francis Drake Boulevard is a primary arterial within the county wide system and the only arterial street in the Town. It carries large volumes of traffic between different regions of the County, and is a major feeder road to Highway 101. Sir Francis Drake Boulevard is designed with two travel lanes for traffic through the Ross planning area. There are no parking lanes or sidewalks on either side of the street, although the shoulder area is often used for these purposes. Access is also necessary to individual single family homes so there is some interference between driveways and traffic flow.

Local Collector Streets: Other streets function as local collectors feeding into Sir Francis Drake Boulevard. Local collectors are two lanes with improvements and width depending on age and terrain. Lagunitas Road, Laurel Grove Avenue and Winship Avenue are the primary local traffic collectors providing access to Sir Francis Drake Boulevard. Local streets such as Shady Lane, Poplar Avenue and Laurel Grove Avenue are suitable only for short-run local traffic to and from the Ross area, and cannot provide through traffic relief to Sir Francis Drake Boulevard. In fact, diversions have been controlled with the use of stop signs and limited turning movements at certain times of the day.

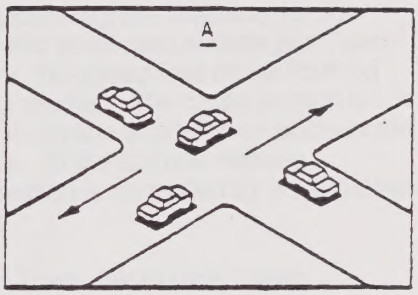
Local Streets: Other streets in Ross serve only specific residential areas. Since, the Town of Ross extends up steep wooded hills to the watershed ridges and steep slopes and drainage ravines occupy much of the area, topography creates the most serious circulation constraint . The strong desire to preserve native trees and brush cover and avoid erosion problems also discourage the construction of other than minor access ways with narrow roadbed benching and minimal cuts and fills in steeper slope areas. Large lots and low residential density have permitted preservation of much of the natural tree cover, minimized erosion problems and produced traffic volumes which may be served by these relatively narrow streets.

LEVELS OF SERVICE

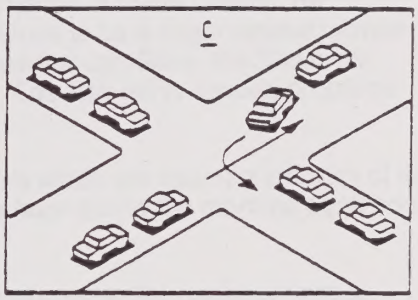
It is standard practice to categorize the quality of traffic flow in terms of "Level of Service" (LOS) categories. Levels of service are typically calculated at roadway junctions, since this is where the major constraints occur in a roadway system. The six Levels of Service, ranging from "A" through "F", provide a standard method of describing operating conditions based on a comparison of street or intersection volumes to the theoretical capacity of the facility, with letters identifying conditions from best to worst, respectively.

Levels of Service "A", "B" and "C" represent conditions where traffic volumes are below capacity of an intersection; Levels of Service "D" and "E" represent conditions where volumes are near the capacity; and Level of Service "F" represents conditions where the demand for travel exceeds the capacity of an intersection to the extent that severe congestion would occur.

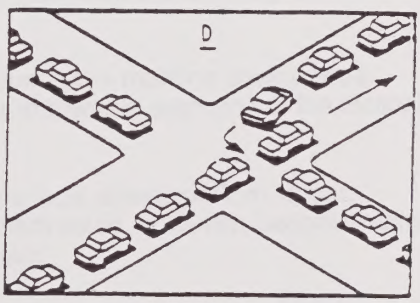
Level of Service "A" - *Volume/Capacity Ratio 0-0.59*
- Free flow conditions
- Low volumes
- High operating speed
- Uninterrupted flow
- No restriction on maneuverability
- Drivers maintain desired speeds
- Little or no delays



Level of Service "B" - *Volume/Capacity Ratio 0.60-0.69*
- Stable and acceptable flow condition
- Operating speeds beginning to be restricted
- Motorists rarely wait through more than one traffic indication

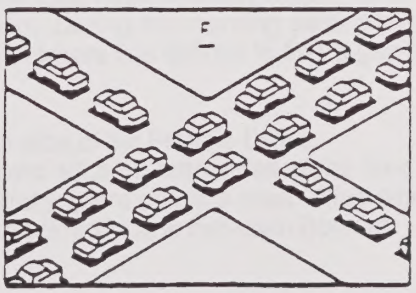


Level of Service "C" - *Volume/Capacity Ratio 0.70-0.79*
- Stable flow but speed and maneuverability restricted by higher traffic volumes
- Satisfactory operating speed for urban conditions
- Delays at signals



Level of Service "D" - *Volume/Capacity Ratio 0.80-0.89*
- Approaching unstable flow
- Low speeds
- Major delays at signals at times
- Little freedom to maneuver
- Some motorists, especially left turners, may wait through one or more signal indications, but enough cycles with lower demand occur to prevent excessive backups

Level of Service "E" - *Volume/Capacity Ratio 0.90-0.99*
- Lower operating speeds
- Volume at or near capacity
- Unstable flow
- Major delays and stoppages
- Very long queues may create lengthy delays, especially for left turning vehicles



Level of Service "F" - *Volume/Capacity Ratio 1.00 or greater*
- Forced flow conditions
- Low speeds
- Volumes below capacity, may be zero
- Stoppages for long periods because of downstream congestion
- Volumes drop to zero in extreme cases

Another concept which is used to discuss the operational characteristics of an intersection is the volume-capacity ratio. Volume capacity ratios represent the percent of an intersection's capacity which is occupied by vehicles. Volume-capacity ratios may be related to levels of service as shown below. It is common practice to define a level of service which is acceptable for planning purposes. Many cities, such as San Rafael and Corte Madera in Marin County, have designated Level of Service "D" to be the minimum acceptable level of service for planning purposes.

EXISTING ROADWAYS

The key roadways and intersections located in the Ross planning area are discussed below in general terms. The majority of the roads in the Town are narrow, curbless, do not have room for parking and do not afford sidewalks. They are typical of rural roadways.

Sir Francis Drake Boulevard: This arterial street provides the major access/egress roadway for the residents of Ross to the outlying areas as well as a regional roadway for traffic generated outside the Town. As one approaches the Town on Sir Francis Drake Boulevard from the east, the speed limit drops from 35 miles per hour to 25 miles per hour and road narrows to two lanes without a median. The cross-section is approximately 26 feet wide through the Town. Two-phase, fixed-time traffic signals and left-turn pockets are located at the intersections of Lagunitas Road and at Laurel Grove Avenue. At the Bolinas Avenue intersection, Sir Francis Drake Boulevard widens to four lanes. This intersection is controlled by a multi-phase traffic signal with an left-turn phase for traffic turning left to Bolinas Avenue.

The location of Ross is a fundamental factor which affects traffic volumes in Town. Sir Francis Drake Boulevard carries a relatively high volume of through traffic. Since route choices in Marin County are restricted because of geographical constraints, this roadway will likely continue to be a major arterial between the eastern and western portions of the county. Since this roadway passes through Ross, the Town will continue to be impacted by development activity outside the Town limits. This has led to several problems which affect the Town of Ross:

(1) Traffic volumes on Sir Francis Drake Boulevard have reached levels which are near the capacity of the roadway. Speeds in the peak direction average 5 to 20 miles per hour during the morning peak hour and 25 to 35 miles per hour during the evening peak hour.

(2) Access to Sir Francis Drake Boulevard is difficult for the residents who enter the roadway from a driveway or at a non-signalized intersection.

(3) Traffic queues on Sir Francis Drake Boulevard are pronounced during the morning peak period. Eastbound queues occasionally reach the merging section to the immediate east side of the Bolinas Avenue intersection.

(4) Both morning and evening diversions from Sir Francis Drake to the local streets of Ross occur, though these diversions are not significant in number. This problem could, however, become more pronounced if congestion increases on Sir Francis Drake Boulevard.

(5) The left-turn bay on Sir Francis Drake Boulevard for movements to Lagunitas Avenue, which has a capacity of five car-lengths, fills-up during the evening peak period. During the morning peak period this movement is lower; however, the opposing volume is at a level where it is difficult to find a gap for a driver to make the turn.

Shady Lane: This low volume roadway runs parallel to and on the south side of Sir Francis Drake Boulevard. Shady Lane is narrow with trees pressing against the pavement edge on both sides of the lane. Pedestrian and bicycle activity is extensive, as school children, walkers and joggers use this road. Stop signs are located on both ends of Shady Lane and two stop signs are located on Shady Lane between Bolinas Avenue and Lagunitas Avenue.

Lagunitas Avenue: Providing the principal access to the Town, Lagunitas Avenue is a two-lane collector street. The characteristics of traffic flow on this street are typical of uncongested local streets. A traffic signal

is located at the northern terminus at Sir Francis Drake Boulevard and the intersection with Shady Lane is controlled by a multi-way stop sign.

Poplar Drive: This street also runs parallel to Sir Francis Drake Boulevard, connecting the downtown area with Kentfield. The traffic consultant observed that a large percentage of the traffic with destinations within the Town use this roadway.

Bolinas Avenue: Running perpendicular to Sir Francis Drake Boulevard, Bolinas Avenue is located on the western boundary of the Town of Ross. This roadway is equipped with sidewalks and some parking is available. Traffic signals exist at its intersections with Sir Francis Drake Boulevard and San Anselmo Avenue. At the intersection with Shady Lane, left-turns are prohibited during the morning peak period. The purpose of this is to discourage the use of Shady Lane by through traffic. A relatively high number of violations occur and an equal number of drivers pass the intersection, make a U-turn, and double-back to Shady Lane. In a small sample the traffic consultant observed that most of these drivers are destined to locations within Ross; thus, it appears that the number of drivers currently diverting from Sir Francis Drake Boulevard is very small.

Laurel Grove Avenue: Laurel Grove is a two-lane collector roadway that serves as a link between local residential streets and Sir Francis Drake Boulevard. Laurel Grove Avenue intersects twice with Sir Francis Drake Boulevard at signalized intersections; near Lagunitas and about one mile to the southeast in Kentfield.

EXISTING TRAFFIC CONDITIONS

Traffic counts were conducted by Wilbur Smith & Associates during the morning and evening peak periods on two separate days in March, 1987. The resulting peak hour volumes are shown in the figures for morning and evening conditions. The peaking characteristic in the area is for the majority of the traffic to be eastbound in the morning and westbound in the evening. Evening peak hour volumes were higher; however, the directional peak during the morning peak hour in the eastbound direction is nearly double the volume of the westbound direction. As a result, the queues during the morning tend to be as long or longer than during the evening peak hour. The volumes on local streets tend to be much lower than on Sir Francis Drake Boulevard. The table below shows the existing level of service at major intersections in the Town.

Existing Traffic Level of Service
1987

Intersection	Morning Peak Hour Level of Service (LOS)	Evening Peak Hour Level of Service (LOS)
Sir Francis Drake/Bolinas	A	A
Sir Francis Drake/Laurel Grove	A	D
Sir Francis Drake/Lagunitas	D	A
Bolinas/Shady Lane	A	A
Lagunitas/Shady Lane	A	A
Poplar/Bridge	A	A

Source: Wilbur Smith & Associates (1987)

TRAFFIC FORECASTS

Traffic conditions were modeled as they were estimated to occur with the addition of traffic under three future development scenarios:

(Scenario #1) The impact of potential additional development in Ross only;

(Scenario #2) The impact of additional development in Ross plus cumulative development outside of the Town; and,

(Scenario #3) Scenario #2 impacts with additional diversion from Sir Francis Drake Boulevard.

Scenario #1 - Local Impacts

The development potential in the Town of Ross was estimated to range from about 50 new single family homes to a maximum of about 80 new single family homes, depending on development feasibility. To be conservative, the larger estimate of development potential was used in the traffic study conducted by Wilbur Smith & Associates. This difference in the amount of growth for the area is relatively minor in terms of traffic and would not introduce any major impacts.

Trip Generation: The trip rate of 11 trips per day per dwelling unit and 1.1 trips per peak hour per dwelling was assumed to be a reasonable estimate of traffic generation in Ross. The standard rate of 10 trips per dwelling unit, as documented by the Institute of Transportation Engineers (ITE), was considered to be low for this community. Maximum development potential amounts to an estimated increase of 86 trips per hour during the evening peak hour and 67 trips during the morning peak hour. The resulting morning, evening and daily trip generation is shown below for the maximum development potential within the Town.

Trip Generation for Estimated Maximum Development Potential by Traffic Zone in the Town of Ross*

Traffic Zone	Number of Units	Average Daily Trips	Morning Peak Hour Trips		Evening Peak Hour Trips	
			Inbound	Outbound	Inbound	Outbound
1. Bolinas	25	275	6	15	17	10
2. Lagunitas	13	143	3	8	9	5
3. Bridge	5	143	3	8	9	5
4. Laurel Grove	25	275	6	15	17	10
5. Winship	12	132	3	7	8	5
Total	80	880	19	48	54	32

*Trips in other traffic zones generated from areas outside the Town of Ross

Source: Wilbur Smith & Associates (1987)

Trip Distribution and Assignment: The traffic which was estimated to be generated by the maximum new potential development was assigned to the roadway system according to the distribution patterns of existing traffic along the shortest path to each external zone with a small area traffic assignment model. The incremental traffic was added to existing traffic volumes for morning and evening peak hour traffic, as shown in the figures.

Traffic Impacts: The impact of the maximum development potential in the Town would be less than daily fluctuations in traffic volumes in the area. The volume-capacity ratios at the key intersections in the area would increase by 0.01, or 1% of the intersection's capacity at the most. The level of service category at each intersection would not change. In short, the maximum potential development in the Town would not have a significant impact on traffic conditions.

Scenario #2 - Cumulative Impacts

The demand for travel on Sir Francis Drake Boulevard is expected to increase proportionally to future growth in Marin County. However, since the roadway is currently near capacity, the actual increases in traffic volumes are expected to be minimal. Drivers travelling between points to the north would tend to use alternative routes through San Rafael in situations where this option is available. It is also expected that the peak period will lengthen as the demand for travel in the corridor increases.

An estimate of the future demand for travel was made based on projections by the Association of Bay Area Governments to the year 2005. The type of future growth which would have the greatest impact on Sir Francis Drake Boulevard will be the increase in employed residents who live to the west of Sir Francis Drake

Boulevard and who work outside their community. The table on the next page shows the number of employed residents and jobs in the areas which would have the greatest impact on Ross. Between the years 1985 and 2005, relatively little change in conditions are forecasted for the Town of Ross.

The greatest impact on through trips are expected to be generated in San Anselmo and in Fairfax where a total increase of 1,100 additional employed residents is forecasted. It is expected that the majority of these employed residents would be working to the east of Ross, since the majority of the employment opportunities lies to the east. The majority of these trips, however, are expected to travel through San Rafael rather than continuing along Sir Francis Drake Boulevard through the Town of Ross. It is reasonable to assume that only 25% of these new work-trips would use Sir Francis Drake Boulevard, and it is typical for only half of the commuter trips to occur during the peak hour. Thus, it is estimated that approximately 140 new trips would be added to Sir Francis Drake Boulevard through the Town of Ross in the peak direction during both the morning and evening peak hour. Traffic volume increases in the off peak direction could be accommodated without a decrease in intersection levels of service.

Employment Projections

	Employed Residents		
Area	1985	2005	Increase
Ross	1,100	1,200	100
San Anselmo	7,900	8,200	300
Larkspur/Kentfield	10,200	11,400	1,200
Fairfax	4,900	5,700	800

Source: Association of Bay Area Governments, Projections '85

The addition of 140 trips amounts to an increase in the volume capacity ratio of 0.09 at the intersections of Sir Francis Drake Boulevard at Lagunitas Avenue and at Laurel Grove Avenue. Assuming that no diversion occurred, the levels of service shown below would result. The levels of service "E" which are shown indicate conditions where delays increase and vehicles would need to wait for several cycle lengths to clear an intersection. There is also the implication that left turns on Sir Francis Drake Boulevard would become more difficult, and the left turning vehicles would be more likely to backup into the through lane, causing even greater congestion.

Future Traffic Level of Service with Cumulative Traffic Impacts

Intersection	Morning Peak Hour Level of Service (LOS)	Evening Peak Hour Level of Service (LOS)
Sir Francis Drake/Bolinas	A	A
Sir Francis Drake/Laurel Grove	B	E
Sir Francis Drake/Lagunitas	E	B
Bolinas/Shady Lane	A	A
Lagunitas/Shady Lane	A	A
Poplar/Bridge	A	A

Source: Wilbur Smith & Associates (1987)

Scenario #3 - Cumulative Impacts with Diversion

With the increased congestion on Sir Francis Drake Boulevard as estimated above, drivers would have an increased propensity to divert from Sir Francis Drake Boulevard onto the local streets of Ross. This problem would be most pronounced during the morning peak period in the eastbound direction. The travel time

using Shady Lane to Ross Common and Poplar Avenue is currently longer than the main route on Sir Francis Drake Boulevard, as a total of five stop signs are encountered before the Willow Bridge Road intersection on Poplar Avenue.

The average travel time on Shady Lane, as determined by a series of trial runs during the morning peak hour, is 3.43 minutes. To travel the same distance on Sir Francis Drake Boulevard during the morning peak hour required an average time of 2.75 minutes. As soon as the travel time on the Sir Francis Drake Boulevard route becomes longer than the Shady Lane route, it could be expected that a higher number of drivers would choose to divert. This pattern is currently being experienced to a high degree along the Highway 101 corridor.

Assuming that Level of Service "E" (volume-capacity ratio 0.90) constitutes the level where diversion becomes the more attractive route, the volume of vehicles which would divert would amount to only 70 vehicles per hour during the morning peak hour. While this would not cause a radical change in levels of service along this route, as shown below, the Shady Lane route is not as desirable for travel for safety reasons. The pedestrian and bicycle volumes on this route are much higher than on Sir Francis Drake Boulevard (where non-motorized transport is almost nil during the peak periods) and the roadway is narrower. Since this condition presents the potential for an increased accident rate, it would be advisable to find measures to discourage this activity.

ALTERNATIVE IMPROVEMENTS TO LESSEN FUTURE IMPACTS

In order to lessen, or mitigate, the impacts of the problems which have been identified in the preceding sections, a shopping list of possible mitigation strategies has been developed. The policies in the Community Development Element (the Goals, Policies and Implementing Actions section) describe specific actions recommended in the General Plan. The discussion in this section provides an analysis of these and other alternatives considered.

It is recognized that the Town of Ross would likely not support alternatives which would alter the character of the Town. Thus, the capital intensive measure of widening Sir Francis Drake Boulevard was not considered in detail in the traffic study prepared by Wilbur Smith & Associates. However, it should be noted that future conditions would warrant this improvement from purely a traffic standpoint. Some of the other measures presented in this section may not be feasible nor ultimately desirable from the perspective of the Town's residents; nevertheless, these ideas are presented here in order to assure that as many potential solutions as possible are examined so that one solution is not overlooked.

The traffic concerns in the planning area are related to two roadways: Sir Francis Drake Boulevard and Shady Lane. Because the Ross-only impacts of additional traffic in terms of traffic flow conditions would not require mitigation, these improvements are related to impacts caused by regional growth as they have been estimated to impact the Town. Four problems have been identified which should be resolved:

(1) Traffic queues on Sir Francis Drake Boulevard;

(2) Access to private driveways from Sir Francis Drake Boulevard;

(3) Left-turn problems on Sir Francis Drake Boulevard; and,

(4) Traffic infiltration to Shady Lane and other local streets.

Several potential solutions to the above problems and the advantages and disadvantages of the solutions are shown in the table on the following page. As shown in the table, there are a limited number of alternative improvements to reduce infiltration of traffic onto Shady Lane. The merits of each potential improvement are summarized in the table on the next page and discussed in more detail on the following pages.

Alternative Traffic Measures

Traffic Problem	Potential Mitigation	Advantages	Disadvantages
Traffic queues on Sir Francis Drake Boulevard	Widen Sir Francis Drake Boulevard to 4-lanes; add multi-phase traffic signal	Reduced traffic congestion and reduced pollution	Expensive; would change the character of the Town
Access to private driveways from Sir Francis Drake Boulevard	Two-way left turn lane along Sir Francis Drake Boulevard	Improved access to private driveways; potential use for through traffic	Possible Right-of-Way needed; impact on the character of the Town
Left-turn problems on Sir Francis Drake Boulevard	Lengthen the storage bay for left turns to Lagunitas Road	Left-turn queues would be less likely to spill-over into the through traffic	Greater delays for left-turning vehicles would be encountered if a left-turn phase were added (although a left-turn phase would add more yellow time)
	Change the traffic signal timing to allow for longer green time on eastbound approach	Left-turn queues would be less likely to spill-over into the through traffic	Greater delays would be encountered for through traffic with a longer red-time
Traffic diversion to Shady Lane	Continue enforcing left-turn prohibition on southbound Bolinas to Shady Lane	Some discouragement for infiltration during morning peak	Inconvenient to residents; increased infiltration via U-turns
	Install a traffic throttle on Shady Lane	Discourages infiltration	No precedence in United States; slight inconvenience to residents
	Create a cul-de-sac on Shady Lane	Infiltration not possible on Shady Lane	Very inconvenient to residents
	Other traffic barriers	Discourages infiltration	Varying degrees of impact on residents

Source: Wilbur Smith & Associates (1987)

Sir Francis Drake Boulevard: Unless some action is taken, it is expected that the future growth outside the Town limits would contribute enough additional traffic pressure to cause greater traffic congestion on Sir Francis Drake Boulevard. Widening this road would dramatically improve operating conditions; however, it would involve substantial capital outlay and would alter the character of the Town. Furthermore, it is likely that the existing demand for travel exceeds the existing traffic volumes on Sir Francis Drake Boulevard. When congestion is at even its current levels, drivers may schedule their trips to avoid the peak periods, or travel

through San Rafael to avoid the area. If the capacity of Sir Francis Drake Boulevard were increased, it is possible that the traffic volumes on this road would increase even without additional development.

The potential future problem with left-turns off Sir Francis Drake Boulevard to Lagunitas Avenue would create the need for a way to accommodate these turning movements. One solution would be to increase the five-car storage length of the left-turn bay on Sir Francis Drake Boulevard to allow for additional storage.

Shady Lane Infiltration Constraints: The potential mitigation measures presented all are focused on reducing the demand for travel on Shady Lane by increasing the travel time or eliminating the link. These are described below.

(1) **Traffic Throttle:** A traffic throttle would function like a one-way bridge, allowing traffic to pass only in one direction at a time over a raised section of roadway. This measure and the other measures discussed below would tend to discourage infiltration as it would increase the travel time and reduce driver convenience. Alternative pavement textures could be used at the crossing or at the edge of the road to permit two vehicles to pass at slow speeds. A variation on this theme would be to narrow the pavement on Shady Lane to about 12 feet with cobblestone or brick shoulders. In this case, when two cars approached in opposite directions, each vehicle would need to slow and pull onto the textured portion of the pavement.

(2) **Additional Stop Signs:** Additional stop signs have not been considered since the Manual on Uniform Traffic Control Devices (MUTCD) states that stop-signs should not be used for speed control.

(3) **Creating a Cul-de-Sac:** Creating a cul-de-sac on Shady Lane would eliminate infiltration onto this road; however, it would introduce an added inconvenience for residents of the Town and would tend to push traffic onto Sir Francis Drake Boulevard, which is already congested, or to divert onto Norwood Avenue and Fernhill Avenue, which are both local residential streets.

(4) **Barriers:** Other types of barriers have also been considered in terms of their potential to discourage infiltration. Speed bumps will slow traffic, which would make Shady Lane a less desirable route for drivers; however, it would also make the road more difficult to travel. While speed bumps may discourage some infiltration, they are not recommended by the traffic consultant for this purpose on a public street. Traffic barriers, such as those used in Berkeley, which would not allow drivers to continue in a straight line, but force them to drive around a barrier could be used as a traffic constraint. Another option is increased enforcement of the left-turn prohibition from Bolinas Avenue onto Shady Lane during the morning peak period. This would require a police officer to be stationed at this intersection during the morning commute.

SUMMARY OF TRAFFIC CONDITIONS

The traffic generated by the potential development under the General Pan would not create any traffic problems which would require mitigation. The cumulative long-term impacts of growth outside the Town, would, however, have an impact on the operation of Sir Francis Drake Boulevard and possibly on Shady Lane. The impacts on Sir Francis Drake Boulevard would be decreased levels of service, increased delays and longer traffic queues over a longer period of time. The impact on Shady Lane would be related to safety problems with additional traffic diverting from Sir Francis Drake Boulevard to Shady Lane.

In order to maintain reasonable levels of service and to reduce diversion, it is advisable to monitor traffic conditions on Sir Francis Drake Boulevard and on Shady Lane. Without widening Sir Francis Drake Boulevard, few solutions can be identified to accommodate future traffic demands. Given present levels of service, the capacity restraint on Sir Francis Drake Boulevard may preclude this level of increased traffic flow; although, as volumes do increase it will become increasingly difficult to turn left at the two-phase traffic signals. In order to prevent the spilling-over of the left turn lane on Sir Francis Drake Boulevard at the intersection of Lagunitas Avenue, the storage lane may need to be lengthened by 150 to 200 feet to allow for an additional 8 to 10 cars.

The infiltration issue does not warrant action at this point in time; however, if under monitoring it appears that infiltration becomes heavy, it would be advisable to introduce a measure to restrict traffic from Shady Lane.

HIGHWAY 101 CORRIDOR IMPROVEMENTS

The Town of Ross participates in the Highway 101 Corridor Action Committee, which is working to develop a refined assessment of the corridor's transportation needs. That effort has been joined and supported by 28 of the cities, counties and transportation agencies along the Highway corridor from San Francisco to Healdsburg. Phase I of the Action Program concluded that wide ranging and expensive highway, transit improvements and Transportation Systems Management efforts (TSM) would be required to maintain Level of Service D operation in the corridor through the year 2000. Phase II, which is assessing the feasibility and detailed costs of the Phase I consensus improvements and other alternatives is currently under way and expected to be completed in late 1987 or early 1988.

Transportation demand modeling of the anticipated development along the Highway 101 corridor shows that corridor travel demand will approximately double. A major problem area is central San Rafael. As this relates to the Town of Ross, actions that improve the flow of traffic on Highway 101 through San Rafael and areas north of Larkspur during the evening commute would reduce evening bottlenecks and have a beneficial effect on Sir Francis Drake Boulevard by reducing backups and the number of people getting off Highway 101 onto Sir Francis Drake early and using Sir Francis Drake as a diversion. To meet the Highway 101 Corridor Committee Level of Service D goal for Highway 101, several actions are being considered:

- Widening/improving Highway 101
- Providing alternative parallel roads to Highway 101 such as improvement of the Northwestern Pacific Railroad right-of-way with a transit-way and development of local north-south connecting arterial streets
- Increasing/maintaining high levels of bus service for transbay, Sonoma to Marin and local riders;
- Encouraging the use of Transportation Systems Management tools such as carpooling, vanpooling, transit incentives, bicycle incentives and flexible work hours to minimize peak period single occupant vehicle ridership.

The Highway 101 Corridor Action Committee Phase I work identified approximately $945 million to $1,282 million in improvements that will be needed throughout the corridor. Several of the major projects, including the improvement of the Northwestern Pacific Railroad right-of-way as a transitway, extension of the High Occupancy Vehicle (Carpool) vehicle from Larkspur to Santa Rosa, and the development of parallel arterial roadways, would directly affect Marin County. Of the $945 million to $1282 million in improvements, approximately $610 million to $800 million are for projects within Marin County. Half of that cost is for projects connecting Marin to San Francisco and to Sonoma Counties.

Federal and state highway, urban street, and transit funding programs are expected to generate approximately $509 million over the next 20 years and approximately half of that funding or $250 million will need to be used for transit systems operations. Therefore, only $250 million of the $600-800 million can be expected to be funded from outside sources, and the remaining very significant amount will need to be locally generated. Several sources of funding are being considered, including a one-half cent sales tax, one percent motor vehicle tax, 1 cent/gallon motor vehicle fuel tax and one-quarter percent vehicle license surcharge.

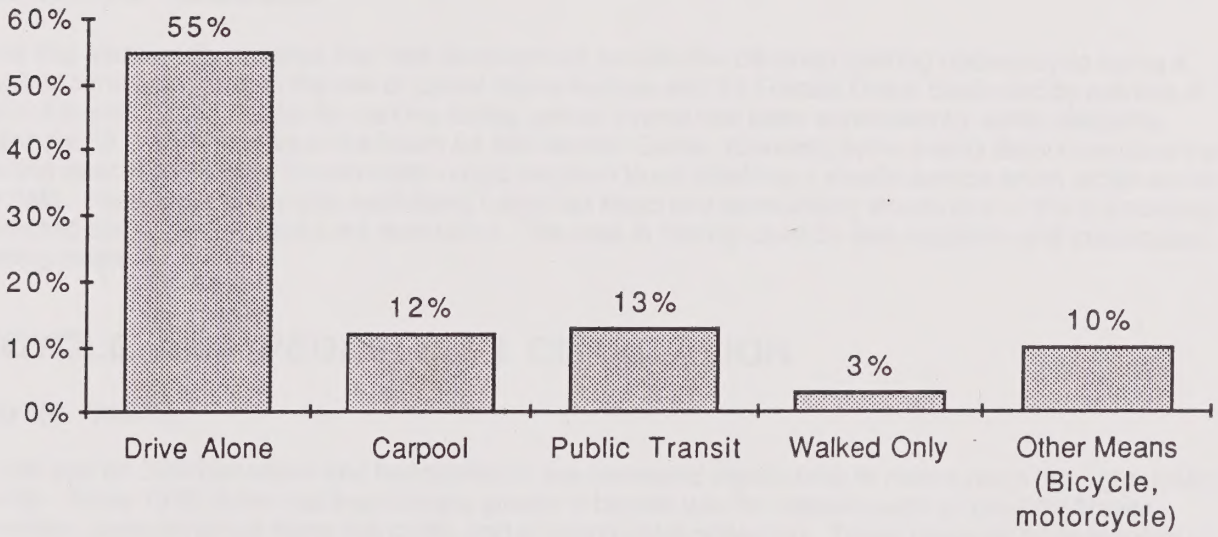
The tables below show trends in vehicle registration in Marin County and mode of transportation to work for Town of Ross residents. In 1980, based on Census data, 36% of Ross employed residents worked in San Francisco and 59% worked in Marin County. Of those who worked in Marin County, 19% worked in the Town of Ross itself.

Vehicle Registration in Marin County
1983-1987

Type of Vehicle	1983	1984	1985	1986	1987
Automobiles	137,498	134,912	138,572	145,100	148,443
Motorcycles	6,193	6,117	6,373	6,482	6,395
Commercial Vehicles	25,219	25,263	26,942	28,597	29,796
Trailers	6,640	6,502	7,946	8,194	8,178
Travel Trailers	1,670	1,626	1,646	1,565	1,537
Total Vehicle Registration	177,212	174,420	181,479	189,938	194,349

Source: California Department of Motor Vehicles (1987)

Mode of Transportation to Work
Town of Ross Residents in 1980



Source: U.S. Census

PUBLIC TRANSIT SERVICE

Transit service in Ross is currently provided by the Golden Gate Bridge Highway and Transportation District (GGBHTD) and Marin County Transit District. Bus stops are located on Sir Francis Drake Boulevard. Based on 1980 Census data, 14% of the commuters in Ross used public transit, compared to 12% of the commuters countywide at the same time. The Golden Gate Bridge, Highway and Transportation District provides four categories of bus service:

(1) **San Francisco Commute Service:** Operates during weekday commute periods in the peak commute direction only between Marin or Sonoma residential areas and the San Francisco Financial District or Civic Center.

(2) **Ferry Feeder Service:** Operates a commute type service during weekday commute periods in

the peak commute direction only, to or from the Marin and San Francisco Ferry Terminals, and scheduled to meet the ferries.

(3) **Transbay Basic Service:** Operates throughout the week between certain principal communities in Marin and Sonoma and the San Francisco Civic Center/Transbay Terminal corridor.

(4) **Marin Local Service:** Operates local transit service between the principal communities of Marin County under contract with the Marin County Transit District.

Transit services are funded through a variety of programs. The GGBHTD operates the San Francisco Commute Service, Ferry Feeder Service, and Transbay Basic Services as an inherent part of the District's program. The fare box return for the buses and ferry system was approximately 45% of the operating costs for fiscal year 1984/85 with the remaining 55% provided as follows: Federal, 5 percent; state and local, 22 percent; (this includes 95% of the County's $4,603,829 Transportation Development Act funds) GGBHTD toll revenue, 28 percent.

GGBHTD is prohibited by State law from subsidizing local, intracounty service. These services are provided by Marin County and the Marin County Transit District through a contract with the GGBHTD. Funding for these programs comes from the County general fund and 5% of the County's and City's Transportation Development Act grant (TDA). For l986/87 the County committed $600,000 from the general fund and 5% TDA grants totalling $230,191.

PARKING ISSUES

Ross has traditionally required that new development provide the off-street parking necessary to serve it. There is concern regarding the use of Laurel Grove Avenue and Sir Francis Drake Boulevard by patrons of Marin Art and Garden Center for parking during special events has been expressed by some residents. There are 85 marked spaces at the Marin Art and Garden Center, however, some events draw more cars than existing spaces available. Consideration could be given to establishing a shuttle service when larger events are held. Parking problems also exist along Lagunitas Road and surrounding streets due to the dramatically increased use of the Phoenix Lake watershed. The area is heavily used by non-residents and inadequate parking exists.

BICYCLE AND PEDESTRIAN CIRCULATION

Bicycle Routes

Bicycle use for both recreation and transportation has increased significantly in recent years throughout Marin County. Since 1970, there has been steady growth in bicycle use for reasons such as physical fitness, recreation, concern about rising fuel costs, and environmental protection. These interests have resulted in increased public pressure for bikeways and routes where bicycles can be ridden with ease and relative safety. The only Class I bicycle route in Ross extends from the Post Office opposite Ross Common along Corte Madera Creek to Kentfield. Class I routes are separate bicycle paths. There is also significant use of local connecting streets throughout the Town, including Shady Lane, Ross Common and Lagunitas Road.

The degree of community support for more and improved bike trails was demonstrated in a 1977 County-wide public opinion survey. Additional and better bikeways for both recreation and transportation use were the most highly rated recreation needs. In response to these needs the County adopted a bike route plan. Transportation Development Act Article 3 provides most of the funding used for implementation of regional and local bike plans. Marin County's share of TDA funds was $90,000 in 1985.

Walkways and Hiking Areas

Walkways or walking areas are available adjacent to many public streets in Ross. Major walking streets include Lagunitas Road and Shady Lane. Major destinations include Ross Common, Town Hall, Ross Elementary School and Phoenix Lake. Some walkways also provide emergency connectors. These are discussed in the Safety Background Section and shown in Figure 12.

AM PM **Levels of Service**

"A", "B" and "C" represent conditions where traffic volumes are below capacity of the intersection; "D" and "E" represent conditions where volumes are near the capacity; "F" would represent conditions where the travel demand exceeds the capacity of an intersection to the extent that severe congestion would occur. See text of the General Plan for further explanation.

Source: Town of Ross Traffic Study prepared by Wilbur Smith and Associates (1987).

This Map Was Developed For General Planning Usage. The Town Of Ross Is Not Responsible Nor Liable For Use Of This Map Beyond Its Intended Purpose.

Figure 6

TRAFFIC CONDITIONS

N *General Plan*

0 500 1000 1500 2000

TOWN OF ROSS

HOUSING BACKGROUND

HOUSING BACKGROUND

INTRODUCTION

The Town of Ross is one part of the housing market that comprises Marin County as a whole. Marin County has by far the most expensive housing of all Bay Area counties, and the Town of Ross is one of the most expensive communities in Marin County. The price of housing and vacant land in Ross, along with significant environmental constraints affecting the very limited number of potential development sites remaining in the Town, are significant determinants of the type, cost and availability of housing.

The Housing Background section evaluates housing issues in the Town of Ross. In addition, this section and the General Plan's housing goals, policies and programs are intended to comply with the very specific requirements of state housing law. Contents of this section include the following:

- Introduction
- State Guidelines and Requirements for Housing Elements
- Population Characteristics
- Housing Characteristics
- Housing Costs and Household Income
- Housing Needs
- Available Land Inventory and Housing Need
- Potential Constraints to Providing Housing
- Opportunities for Energy Conservation

STATE GUIDELINES AND REQUIREMENTS FOR HOUSING ELEMENTS

Among the mandatory elements which must be included in a general plan is a housing element, as described in Government Code §65583:

> The housing element shall consist of an identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, and scheduled programs for the preservation, improvement, and development of housing. The housing element shall identify adequate sites for housing, including rental housing, factory-built housing, and mobilehomes, and shall make adequate provision for the existing and projected needs of all economic segments of the community.

Housing elements must cover three broad areas: (1) an identification, analysis and assessment of existing and projected housing needs and an inventory of resources and constraints relevant to meeting those needs; (2)a statement of the community's goals, quantified objectives and policies relative to the maintenance, improvement and development of housing; and, (3) a five-year schedule of actions, or programs, which the Town is undertaking or intends to undertake to implement the policies and achieve the goals and quantified objectives of the housing element through the administration of land use and development controls, provision of regulatory concessions and incentives and the utilization of appropriate federal and state financing and subsidy programs when available.

In order to make adequate provision for the housing needs of all economic segments of the community, housing element law requires that the programs do all of the following:

(1) Identify adequate sites which will be made available through appropriate zoning and

development standards and with public services and facilities needed to facilitate and encourage the development of a variety of housing types for all income levels, including rental housing, factory-built housing, mobilehomes, emergency shelters and transitional housing . . . . .

(2) Assist in the development of adequate housing to meet the needs of low- and moderate-income households.

(3) Address and, where appropriate and legally possible, remove governmental constraints to the maintenance, improvement, and development of housing.

(4) Conserve and improve the condition of the existing affordable housing stock.

(5) Promote housing opportunities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, or color.

The program shall include an identification of the agencies and officials responsible for the implementation of the various actions and the means by which consistency will be achieved with other general plan goals. The local government shall make a diligent effort to achieve public participation of all economic segments of the community in the development of the housing element, and the program shall describe this effort.

Probably more so than any other element of the general plan, state law provides very specific direction in terms of housing element content and organization. Nevertheless, these issues must also be viewed in light of the Town's small size, historic character, limited development potential, natural constraints and the high cost of existing housing and remaining vacant land.

POPULATION CHARACTERISTICS

The population in Ross as compared to other Marin County communities is shown below.

Marin County Population Estimates
January, 1987

Jursidiction	Household Population	Mobile Homes	Group Quarters	Total Population
Belvedere	2317	0	0	2317
Corte Madera	8440	0	17	8457
Fairfax	7314	0	14	7328
Larkspur	11142	296	195	11337
Mill Valley	12885	16	313	13198
Novato	44880	761	1069	45949
Ross	2623	0	125	2748
San Anselmo	11867	0	119	11986
San Rafael	44100	803	1485	45585
Sausalito	7555	140	0	7555
Tiburon	8177	2	50	8227
Unincorporated	59148	596	3781	62929
Total County	220448	2614	7168	227616

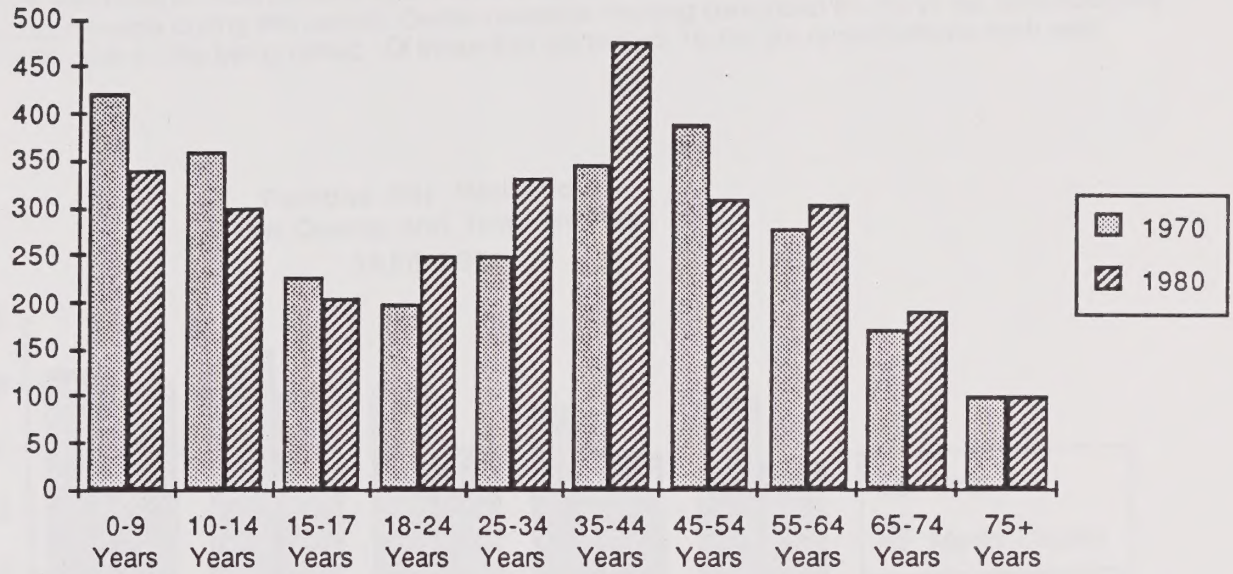
Source: California Department of Finance (January, 1987)

General population trends show that people are living longer, having fewer children and forming smaller households. Further, there are more divorces, more single-parent households (especially those with a

female head of household) and more single-person households than ever before. In line with national trends, Ross is currently experiencing the "graying", or aging, of its population. The trend is more pronounced in Ross and Marin County as a whole than in most communities because of the high cost of housing. National trends indicate that the median age will continue to rise, with Ross's median age remaining higher than the national and Bay Area averages. The median age in the Town of Ross increased from 31.0 in 1970 to 34.4 in 1980 (a 3.4 year increase). Marin County's median age rose from 29.5 in 1970 to 33.6 in 1980 (a 4.1 year increase). By the year 2005, ABAG projects that Marin County's median age will be 41.8. By way of comparison, the median age in the Bay Area is projected to increase from 30.8 in 1980 to 37.1 in the year 2005.

Town of Ross Population Age Distribution

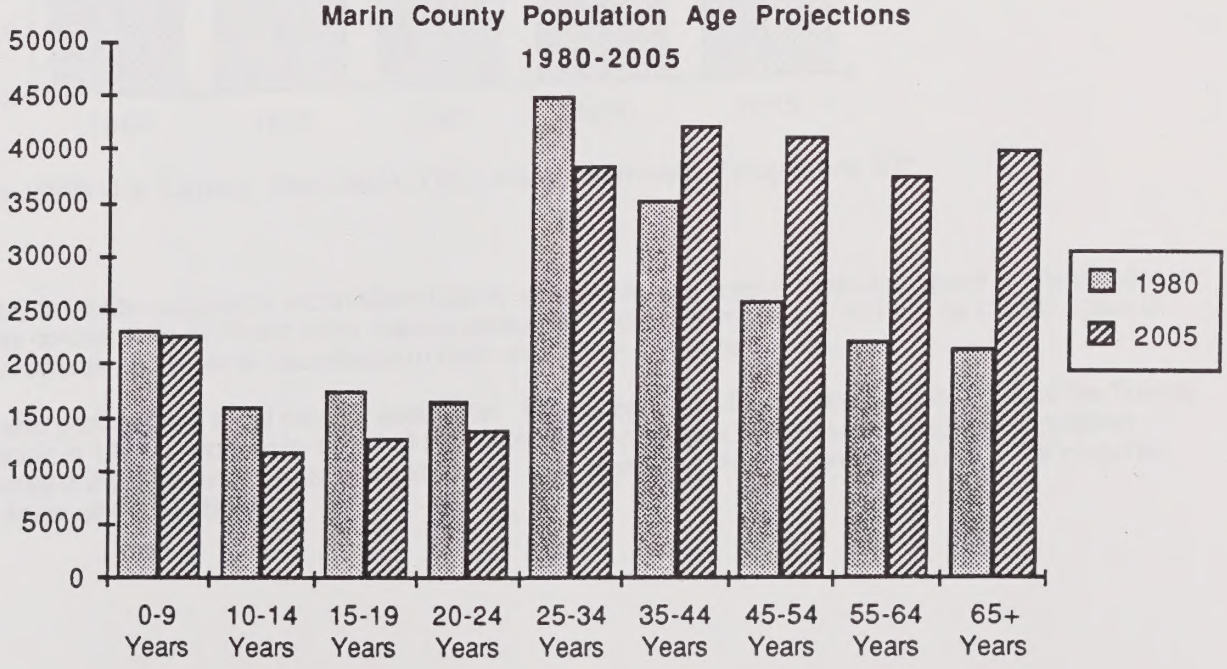
1970-1980



Source: U.S. Census

Marin County Population Age Projections

1980-2005

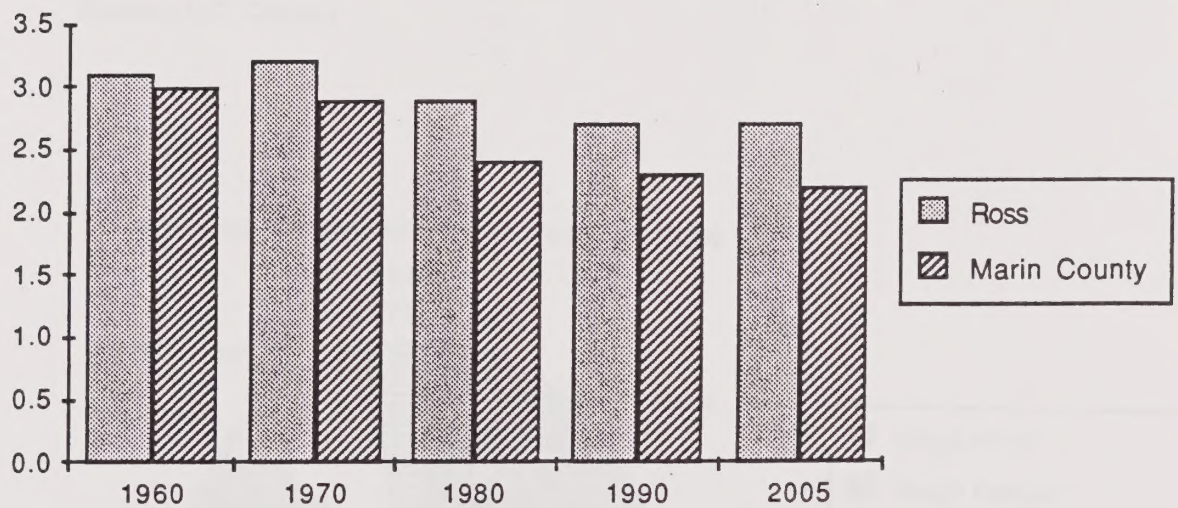


Source: Association of Bay Area Governments Projections '87

Trends show that the proportion of elderly residents in Marin County will be increasing. Ross's increase will be even greater than the County as a whole because the City has a higher proportion of residents over 55 years of age. Meanwhile, the baby boom "echo" phenomenon, caused by women of the baby boom generation now deciding to have children, has elementary schools projecting increased enrollments through at least 1991. Ross's high school districts are projecting declining enrollments over the same time period, but are likely to experience enrollment increases in the middle 1990's.

Dramatic changes have occurred in household composition during the past 10 to 15 years. In Ross, the number of persons per household was estimated to be 2.7 persons per household as of January, 1987. The proportion of one-and two-person households increased sharply between 1970 and 1980, while households with three or more persons shrank as a proportion of the total. Similar but less dramatic trends occurred county-wide during this period. Owner-occupied housing comprised 81.1% of the total occupied units in 1980, with 18.9% being rented. Of those that are rented, 19.4% are rented with no cash rent.

Persons Per Household
Marin County and Town of Ross
1960-2005

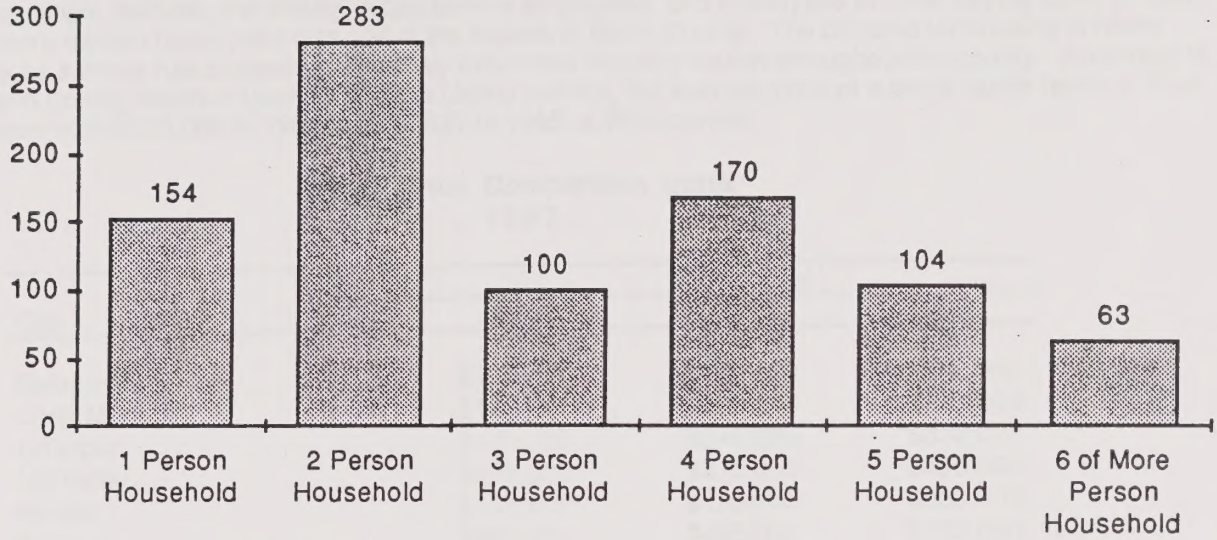


Source: 1980 U.S. Census; Association of Bay Area Governments "Projections '87"

Contrary to trends nationwide and in Marin County as a whole, the Town of Ross had fewer single-persons in 1980 as compared to 1970 and more married persons in 1980 as compared to 1970. The marital status of Ross residents and types of households in Ross are shown on the next page.

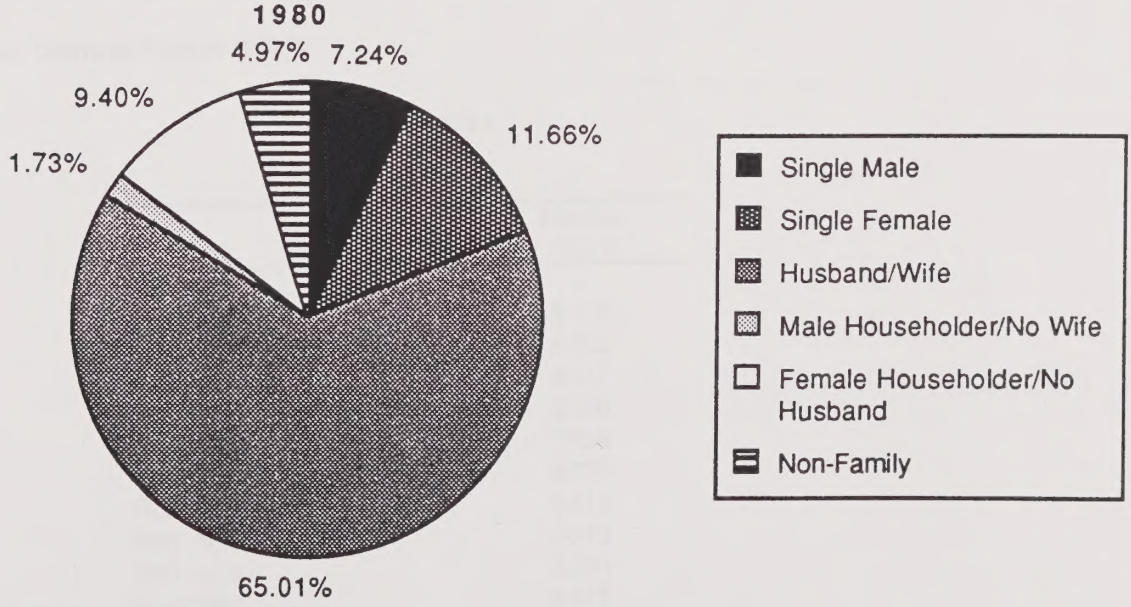
Ross also possesses a small minority population. The minority population accounted for 5.3% of the Town's population in 1980 compared to 11.5% of Marin County's population. In Ross, the Hispanic population comprised 3.2%; Asians, 1.2%; and Blacks, 0.1%. Corresponding Marin County totals are 4.1% Hispanic, 2.4% Asian, and 2.5% Black.

Households by Size in the Town of Ross
1980



Source: U.S. Census

Types of Households in the Town of Ross
1980



Source: U.S. Census

HOUSING COSTS AND HOUSEHOLD INCOME

The cost of owning and the cost of renting housing in Ross have increased sharply over the past several years, pricing many potential residents and homeowners out of the market. Especially hard hit are young families, single mothers, the elderly, public service employees, and employees in lower paying jobs. In 1980, the Town's median home price was one of the highest in Marin County. The demand for housing in Marin County as a whole has created an extremely expensive housing market throughout the county. According to the Marin County Board of Realtors Multiple Listing Service, the average price of a single family home in Ross increased from $325,069 in 1981 to $354,537 in 1985, a 9% increase.

Home Price Comparison Index
1987

City	Price Range*		
	Low	Medium	High
Belvedere	$375,000	$650,000	$1,190,000
Corte Madera	$166,000	$209,000	$247,000
Larkspur	$163,000	$248,000	$332,000
Mill Valley	$186,000	$272,000	$420,000
Novato	$140,000	$188,000	$330,000
Ross	$252,000	$495,000	$783,000
San Anselmo	$161,000	$214,000	$287,000
San Rafael	$185,000	$246,000	$565,000
Tiburon	$210,000	$369,000	$484,000

*Medium price reflects what a three bedroom, two bath home might sell for in the present marketplace. The higher price category is for homes with more amenities; the lower price, fewer amenities. Amenities can include additional bathrooms, bedrooms, view, location, lot size, condition of neighborhood, etc.

Source: Coldwell Banker (1987)

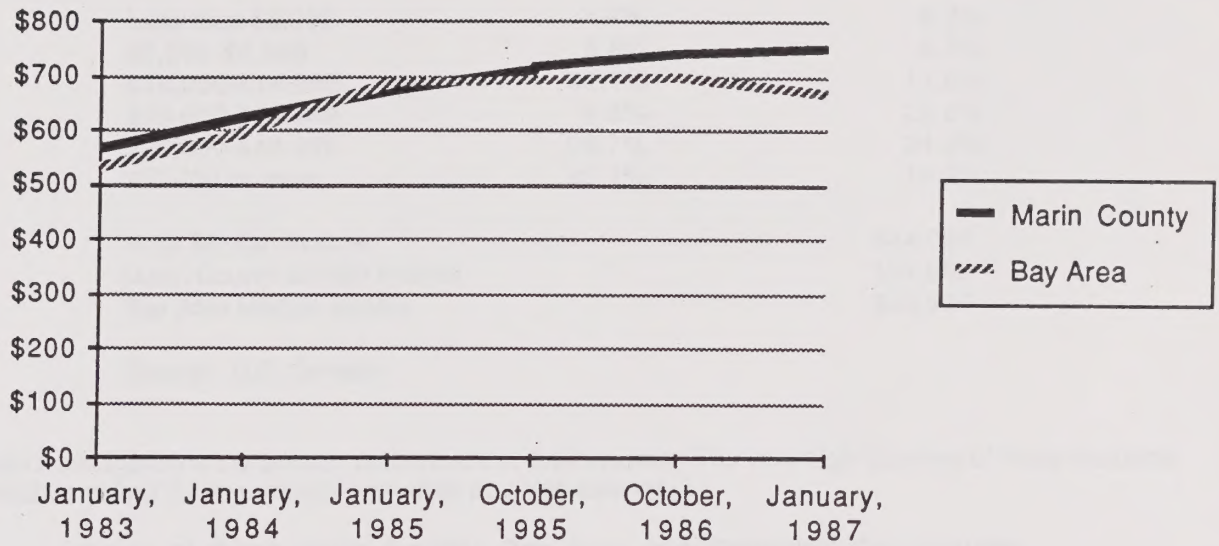
Median Rents
1980

City	Median Rent
Belvedere	$414
Corte Madera	$383
Fairfax	$327
Larkspur	$380
Mill Valley	$396
Novato	$333
Ross	$414
San Anselmo	$318
San Rafael	$304
Sausalito	$419
Tiburon	$501
Marin County	$348

Source: 1980 US Census

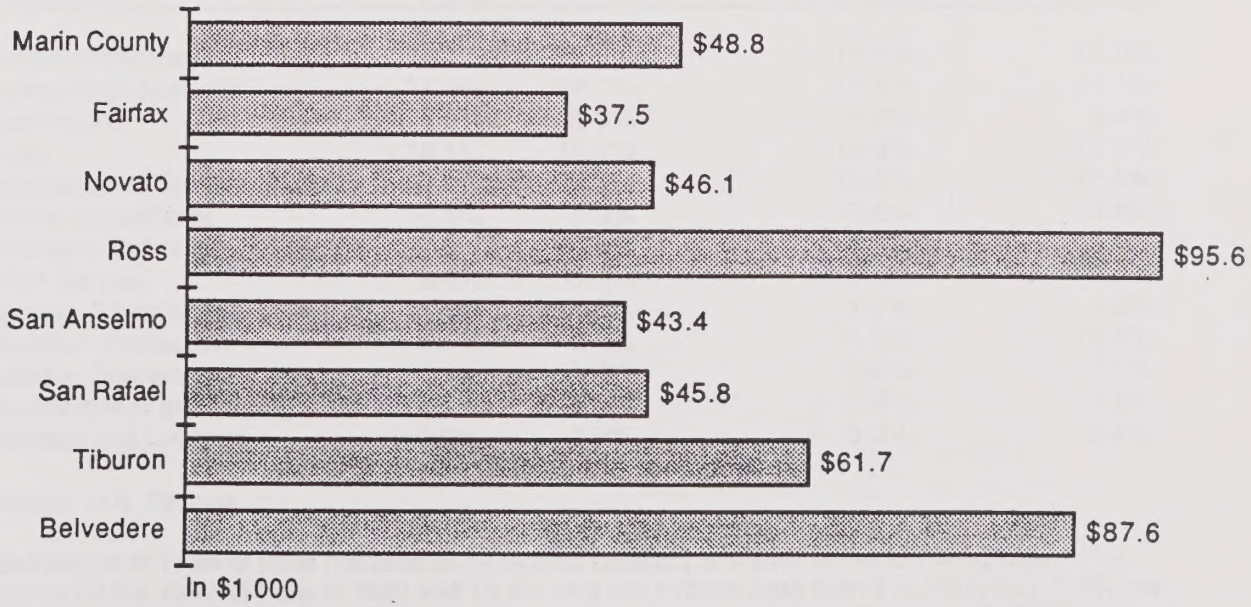
Over the same time, the average price of a single family home in Marin County as a whole increased from $183,293 in 1981 to $200,557 in 1985, also a 9% increase. A survey of Ross households found that people renting rooms or units in Ross were charged an average monthly rent of $283. Data from other areas of the county indicate that rents have been increasing substantially, as shown in the previous chart. Median rents in San Rafael, for example, increase 17% over the two-year period between 1984 and 1986.

Bay Area Rent Changes for a Two-Bedroom Apartment
1983-1987



Source: Bay Area Council (1987)

1985 Average Household Income
(1985 Dollars)



Source: Association of Bay Area Governments "Projections '87"

Ross's 1985 median household income was $89,021, which was he highest in Marin County. Average household incomes for Marin County cities are shown above. Marin County has the highest median income in the Bay Area. A comparison of Ross with the distribution of households by income in Marin County is shown below.

Household Income
1980

Household Income	Town of Ross	Marin County
Less than $5,000	1.7%	6.9%
$5,000-$9,999	5.6%	9.5%
$10,000-$14,999	11.1%	11.6%
$15,000-$24,999	9.8%	22.8%
$25,000-$49,999	28.7%	34.3%
$50,000 or more	43.1%	14.8%
Ross Median Income		$44,094
Marin County Median Income		$24,569
Bay Area Median Income		$20,607

Source: U.S. Census

A person's occupation is the primary determinant of their income. The very high incomes of Ross residents are reflective of their having occupations which pay high salaries.

Town of Ross, Marin County, Bay Area and California Occupations
1980

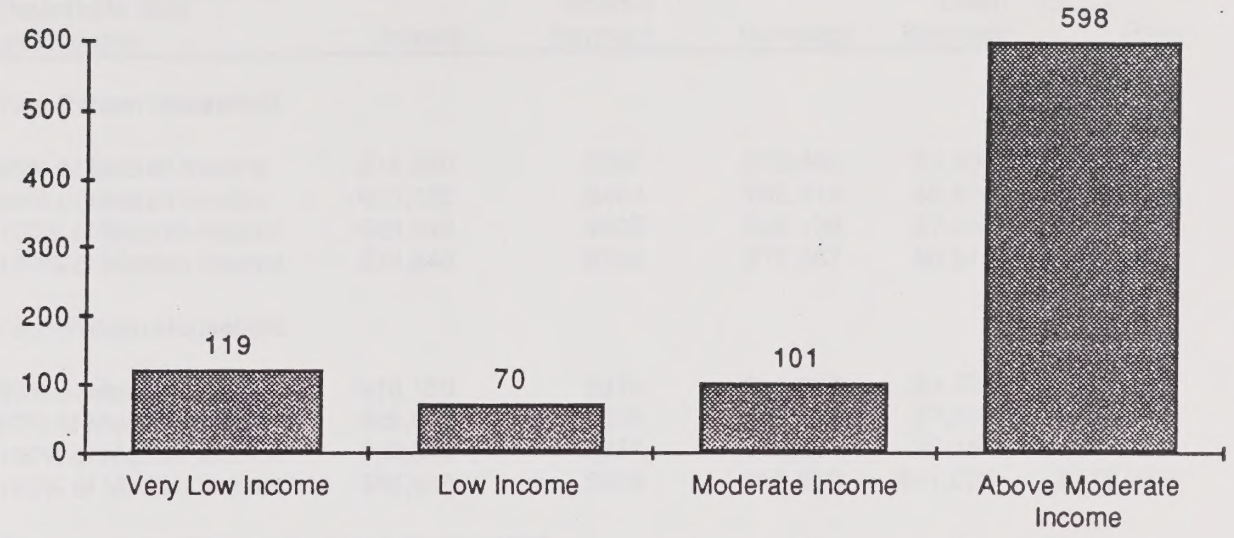
Employed Persons 16 Years of Age and Older

Occupation	Town of Ross	Marin County	Bay Area	California
Executives/Managers	26.1%	17.8%	13.1%	12.0%
Professional Specialist	31.1%	19.9%	14.6%	13.1%
Technicians	0.0%	3.0%	4.2%	3.3%
Sales	18.1%	15.1%	10.9%	10.8%
Administrative Support	4.1%	16.5%	19.9%	18.5%
Private Households	0.6%	0.8%	0.6%	0.6%
Protective Services	0.0%	1.6%	1.5%	1.5%
Other Service	8.0%	9.3%	10.1%	10.5%
Farming, Forestry and Fishing	3.0%	1.5%	1.4%	2.8%
Precision Production	6.7%	8.4%	11.5%	12.3%
Machine Operators	0.0%	1.7%	5.8%	7.1%
Transportation and Moving	0.0%	1.7%	3.2%	3.6%
Handlers and Laborers	2.2%	2.2%	3.3%	3.8%

Source: U.S. Census

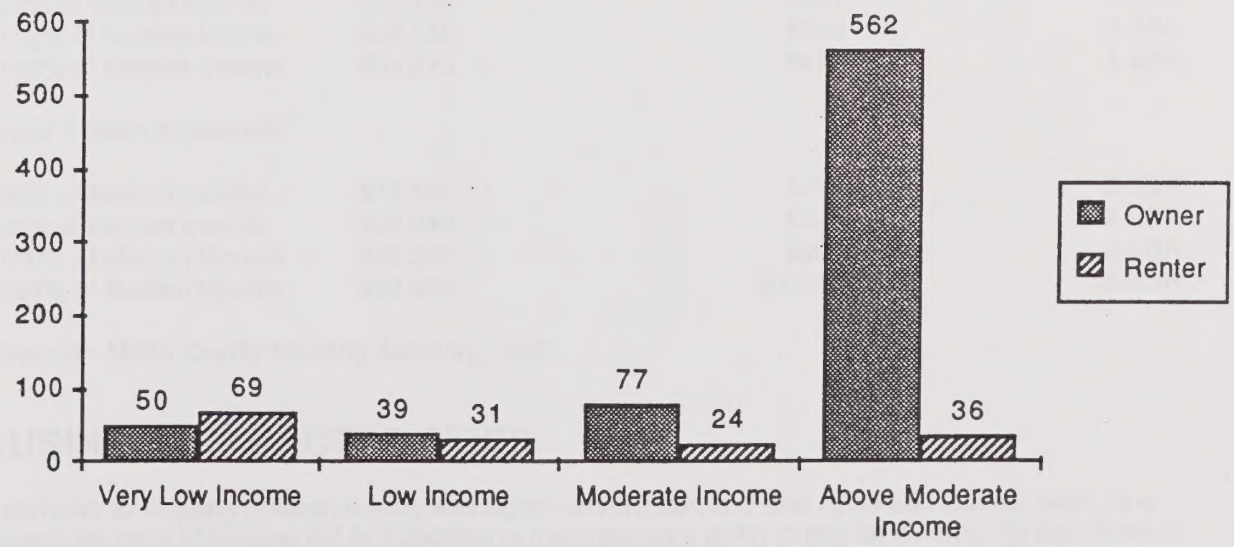
The distribution of Town of Ross households by income category is shown in the following chart. The distribution for the Town of Ross in 1980 was 13.4% very low income (less than $12,500/year), 7.9% low income ($12,500-$20,000/year), 11.4% moderate income ($20,000 to $30,000/year) and 67.3% above moderate income (above $30,000/year). The distribution for owners and renters is also shown.

Distribution of Town of Ross Households by Income Category 1980



Source: U.S. Census

Owners and Renters Income Levels 1980



Source: U.S. Census

The tables on the next page illustrate home ownership and rental affordability at different income levels and for different size households. Assumptions for the home ownership affordability table include: (1) 10.5% 30-year interest rate; (2) 10% down-payment; and (3) 25% of gross income for principal and interest.

Home Ownership Affordability
1986

Household Size and Income	Income	Monthly Payment	Mortgage	Down Payment	Price
Two Person Household					
50% of Median Income	$14,250	$297	$32,468	$3,608	$36,076
80% of Median Income	$23,232	$484	$52,911	$5,879	$58,790
100% of Median Income	$29,040	$605	$66,139	$7,349	$73,488
120% of Median Income	$34,848	$726	$79,367	$8,819	$88,185
Four Person Household					
50% of Median Income	$18,150	$378	$41,337	$4,593	$45,930
80% of Median Income	$29,040	$605	$66,139	$7,349	$73,488
100% of Median Income	$36,300	$756	$82,674	$9,186	$91,860
120% of Median Income	$39,930	$908	$99,209	$11,023	$110,232

Source: Marin County Housing Authority, 1986

Rental Affordability
1986

Household Size and Income	Income	Rent @ 30% of Income	Unit Type
Two Person Household			
50% of Median Income	$14,250	$363	1-2BR
80% of Median Income	$23,232	$581	1-2BR
100% of Median Income	$29,040	$726	1-2BR
120% of Median Income	$34,848	$871	1-2BR
Four Person Household			
50% of Median Income	$18,150	$454	2-3BR
80% of Median Income	$29,040	$726	2-3BR
100% of Median Income	$36,300	$908	2-3BR
120% of Median Income	$39,930	$1,089	2-3BR

Source: Marin County Housing Authority, 1986

HOUSING CHARACTERISTICS

The demand for housing in Marin County and higher construction and land costs and interest rates have increased the price of housing out of proportion to many people's ability to pay for a home. In fact, Marin's home prices were 20 percent higher and rents were 10 percent higher than San Mateo County in 1980, which had the second highest home prices and rents in the Bay Area. In Ross and Marin County as a whole there is a very high demand for the available housing. The total vacancy rate in the Town was estimated at 1.98 percent in January, 1987. A healthy rate is considered to be between 4.5 and 5 percent; where there is a better balance of supply and demand. The Town of Ross contains predominantly single family homes. There were 962 housing units in the Town as of January, 1987. They are distributed as follows:

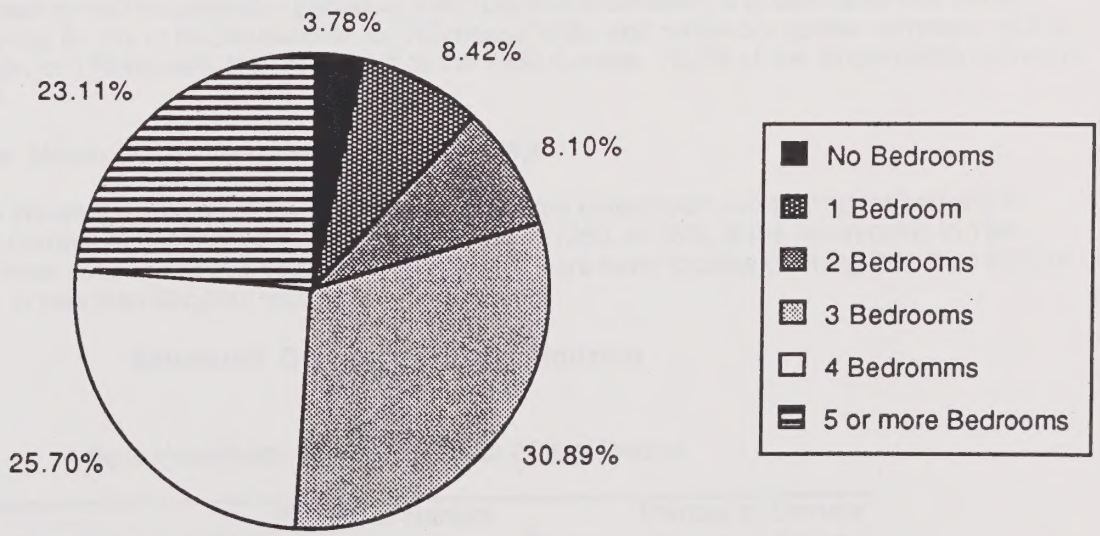
Marin County Housing Units
1987

City or Area	Single	2 to 4	5 or More	Mobile Homes	Total	Percent Vacant	Population/ Household
Belvedere	873	71	63	0	1,007	4.97%	2.42
Corte Madera	2,684	305	593	0	3,582	2.21%	2.41
Fairfax	2,510	603	395	0	3,508	4.53%	2.18
Larkspur	2,353	510	2,777	166	5,806	1.67%	1.95
Mill Valley	4,221	677	1,158	8	6,064	2.57%	2.18
Novato	12,090	1,490	3,146	491	17,217	1.42%	2.64
Ross	874	0	88	0	962	1.98%	2.78
San Anselmo	4,178	433	817	0	5,428	2.52%	2.24
San Rafael	11,031	2,381	6,436	402	20,250	1.00%	2.20
Sausalito	2,036	1,402	985	96	4,519	3.01%	1.72
Tiburon	2,621	285	596	1	3,503	4.20%	2.44
Unincorporated	19,912	1,842	3,518	518	25,790	5.48%	2.43
Total County	65,383	9,999	20,572	1,682	97,636	2.91%	2.33

Source: California Department of Finance (May, 1987)

The size and age of housing units in Ross are shown below. Generally, Ross has larger units and an older housing stock than the county as a whole. Of the 962 housing units in the Town of Ross as of January, 1987, 556 were built before 1940, 330 were built between 1940 and 1960, and 40 have been built since 1970.

Number of Bedrooms/Housing Unit
1980

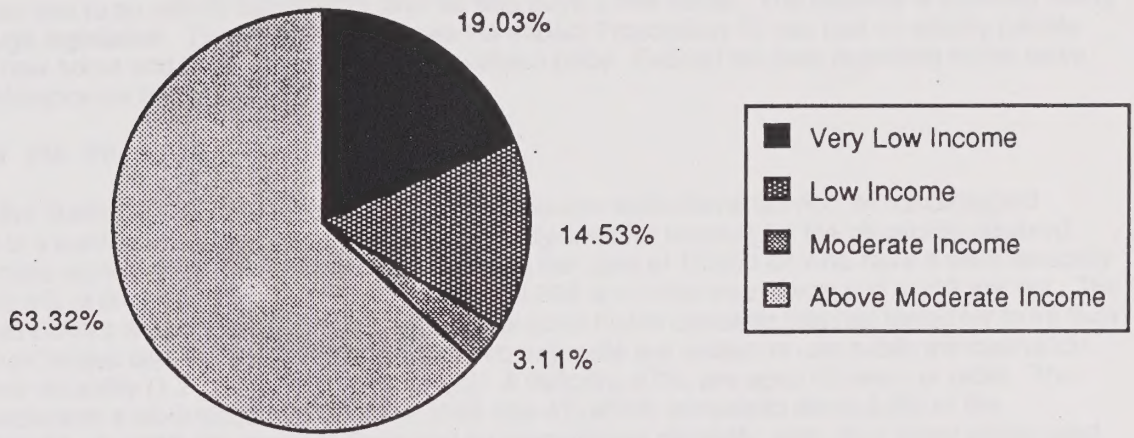


Source: U.S. Census

Elderly Housing

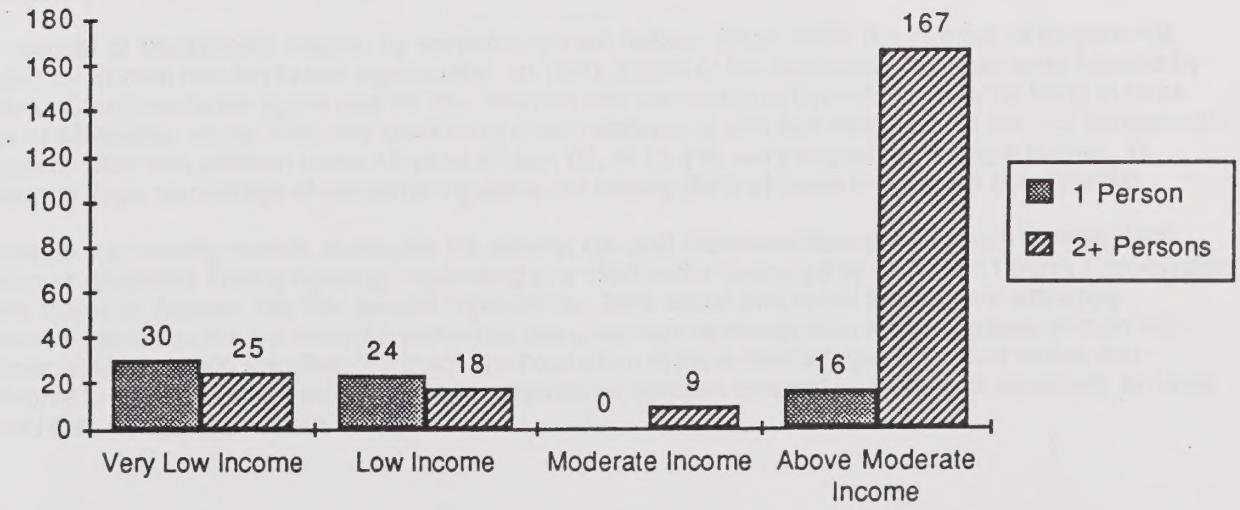
Elderly households are defined as those households with the householder or spouse age 60 or more. In 1980, the number of elderly households in Ross was 280 or 30.2% of all households. This is an extremely high number in comparison to the County as a whole. In Marin County the proportion of elderly households comprised 21.5% of all households in 1980. As a percent of total population, projections show the elderly population increasing from 14.0% of the total population in 1980 to 22.3% of the total population in 2005.

Distribution of Elderly Households by Income Category 1980



Source: U.S. Census

Elderly Households by Income and Household Size 1980



Source: U.S. Census

Approximately 90% of the elderly households in Ross own their homes and 10% rent. Thus, of the total 280 elderly households, it is estimated that 252 live in owner-occupied units and 28 live in renter-occupied units. The graphs below show the distribution of elderly households in Ross by income category and household size in 1980.

The increasing longevity of people and the increasing number of elderly will create a greater need for specialized housing for older residents. In addition, seniors are often limited to fixed incomes, although many have considerable equity in their homes. Elderly households tend to have lower incomes than households in the Town as a whole. The distribution of elderly households by income category is shown above. By comparison, the distribution for the entire Town of Ross in 1980 was 13.4% very low income (less than $12,500/year), 7.9% low income ($12,500-$20,000/year), 11.4% moderate income ($20,000 to $30,000/year) and 67.3% above moderate income (above $30,000/year).

In November, 1986 Proposition 60 was overwhelmingly approved by California voters calling for minimizing the property tax bite to an elderly homeowner over 55 who buys a new home. The initiative is currently being enacted through legislation. The legislation reduces the impact Proposition 13 has had on elderly people purchasing a new home and being assessed at the purchase price. Federal tax laws regarding home sales also allow preference for the elderly.

Housing for the Physically Disabled

According to the Marin Center for Independent Living, a resource and referral service for handicapped people, there is a waiting list of about 60 to 80 people county-wide for housing for the physically disabled. The 1980 Census reports a total of 8,608 persons between the ages of 16 and 64 who have a work disability county-wide (5.4% of the population 16 to 64). Of these, 4,395 are in the labor-force and 4,213 are not. The Census Bureau defines a work disability as a physical, mental or health condition that has lasted for more than 6 months. The Census also reports that 3,841 people county-wide are unable to use public transportation because of their disability (1.7% of the total population). A majority, 67%, are aged 65 years or older. The number of people with a work disability in Ross in 1980 was 47, which comprised about 2.8% of the population 16 to 64. In 1980, 28 people in Ross had a transportation disability, with 18 of those being aged 65 and over. In addition, the Cedars Development Foundation operates a school and home for the developmentally disabled. There are approximately 85 students (total of 101 residents) ranging in age from 12 to 70 that live at the facility.

It is estimated that about 3% of the households in Ross, or about 30 households, have a person who is physically disabled. In general, as the proportion of elderly residents increases, the number of households with a physically disabled person will increase.

Families with Female Head of Household

The number of households headed by women is shown below. Since 1970, the number of households headed by women has increased significantly. In 1980, 23.8% of the households in Ross were headed by women. County-wide the figure was 28.7%. Women who are heads of households may be living in three types of situations: alone, with their children or other relatives, or with non-relatives. Of the 403 households in Ross in 1980 with children under 18 years of age, 62, or 15.4%, were headed by a single mother. In addition, a large percentage of women living alone are elderly (54% of those living alone county-wide).

Women in the housing market, especially the elderly, low-and moderate-income and single parents, face significant difficulties finding housing. According to a 1983 report prepared by the Marin County Commission on the Status of Women, this has several implications: Both owner and rental housing are extremely expensive relative to the low incomes earned by many women; landlords discriminate against women with children; elderly women are often "trapped" in a house that is more than adequate for their needs and expensive to maintain; and there is a need for specialized services to assist women, such as elderly services or child care for working women.

Households Headed by Women
1980

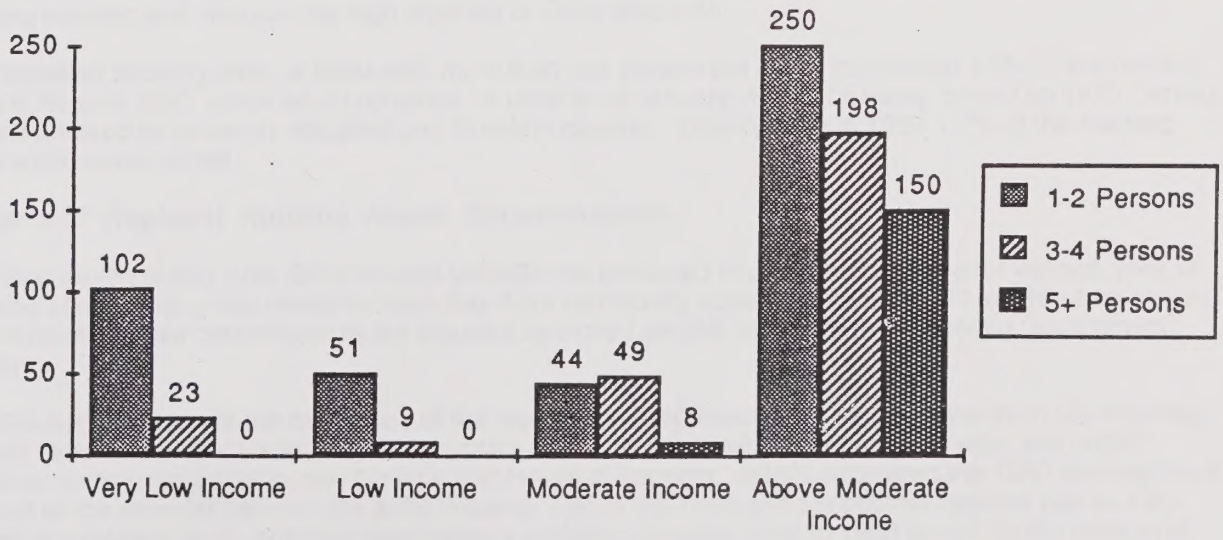
Jursidiction	One-Person Household	Other Family	Non-Family Household	Total	Percent of Households
Belvedere	141	77	16	234	24.7%
Corte Madera	449	358	114	921	28.6%
Fairfax	533	336	193	1,062	32.5%
Larkspur	1,424	396	279	2,099	38.7%
Mill Valley	1,048	573	256	1,877	34.2%
Novato	1,648	1,510	416	3,574	23.1%
Ross	108	87	25	220	23.8%
San Anselmo	935	483	260	1,678	32.9%
San Rafael	3,327	1,718	769	5,814	31.0%
Sausalito	943	220	320	1,483	35.6%
Tiburon	317	225	79	621	23.6%
Unincorporated	2,792	2,169	908	5,869	25.2%
Total County	13,665	8,152	3,635	25,452	28.7%

Source: U.S. Census, 1980

Large Households

Large families, with five or more persons also have special housing needs. A countywide analysis by the federal Department of Housing and Community Development (HUD) found that 31% of the large families who rent have incomes that would qualify them for federal assistance. The were 158 families with five or more persons per household in Ross in 1980. All of these households lived in owner-occupied units. The breakdown of households in Ross by the size of the household and income category is shown below.

Household Income Category
by Persons Per Household
1980



Source: 1980 U.S. Census

Homeless

Housing for the homeless is provided throughout the county on an emergency shelter basis by various churches and the The Housing Center of Marin. The Housing Center estimates that at any given point in time there are between 75 and 200 homeless people in the urban corridor portion of Marin County. There is no estimate available for the Town of Ross, but it is probably close to zero based on discussions with Public Safety personnel. Despite the network of emergency shelters, there is currently insufficient emergency shelter for the homeless, which include housing for the chronically homeless and the temporary homeless. The Housing Center has rehabilitated a building in East San Rafael for use as a permanent shelter. Additional facilities are planned by Innovative Housing to provide shelter for the temporary homeless.

Farmworkers

According to the 1980 Census, there were 33 people in farming, forestry and fishing professions living in the Town of Ross. This constitutes 3.0% of employed persons. Discussions with the State Employment Development Department and based on EDD guidelines (Migrant Seasonal Farm Worker Determination) there are very few, if any, farmworkers in the Town of Ross. ABAG projects that the number of people living in the Town of Ross employed in agriculture by the year 2005 will be zero.

Housing Conditions

There have been no formal Town-wide housing condition surveys done recently in Ross. The most recent survey of Marin County's housing stock was performed in 1971. Of the nearly 20,000 units included in the survey, 9.7% were considered substandard. A limited "windshield" survey of housing conditions in Ross in 1981, performed by Kreines and Kreines, found few houses in need of rehabilitation. Generally, Ross's housing stock is in very good condition, even though there is a predominance of older homes. 1980 Census information indicates that a very small percentage of housing both county-wide and in Ross have substandard plumbing facilities, which is also a measure of housing conditions. In Marin County as a whole substandard units comprised .4% of the owner-occupied units, 1.3% of the renter-occupied units, and .9% of all units. In Ross in 1980, substandard units comprised .1% of the owner-occupied units, 1.7% of the renter-occupied units, and a total of .4% of all units.

The Town of Ross has a Residential Inspection Program that provides for the inspection of homes when they are sold. The building inspector notifies the buyer and seller of any code violations or hazardous conditions requiring repair. Houses in Marin County, and especially in Ross, command such a high price that owners who can maintain their units units have a strong incentive to do so. It is estimated that about 3% of the total housing units in Ross, or 30 homes, may be in need of some type of rehabilitation, with few needing replacement. These figures would seem appropriate given present market conditions, the high value of existing housing and land and the high incomes of Ross residents.

Overcrowded housing units, or those with more than one person per room, comprised 1.5% of the housing units in Ross in 1980, which would comprise 14 units as of January, 1987. Of those, based on 1980 Census, 8 are estimated to be owner-occupied and 6 renter-occupied. County-wide in 1980 1.7% of the housing units were overcrowded.

Local and Regional Housing Needs Determinations

The Association of Bay Area Governments (ABAG) has produced housing need figures for various types of housing and income group needs for each Bay Area community applicable for the 1980 to 1990 time period. These housing need determinations are required by State Law (AB 2853 and the California Government Code).

ABAG's determination of the local share of the regional housing need takes into consideration the following factors: market demand for housing; employment opportunities; availability of suitable sites and public facilities; commuting patterns; and the type and tenure of housing. ABAG calculated the 1980 existing need, defined as the short-fall between the actual vacancy rate in the Town and the optimal vacancy rate of 4.5% (which is a regional goal), and then determined a projected housing need to 1990 based on the number of units to accommodate projected household growth between 1980 and 1990 and the additional units needed to achieve the optimal vacancy rate.

The following table shows the ABAG housing need determinations from 1980 to 1990 for the Town of Ross and other Marin County cities. Categories of need include:

Very Low Income	• Less than 50% of the Bay Area median income
Low Income	• 50%-80% of median income
Moderate Income	• 80%-120% of median income
Above Moderate Income	• More than 120% of median income

Marin County Housing Need Determinations
1980-1990

City or Area	Very Low	Low	Moderate	Above Moderate	Total
Belvedere	7 (17%)	5 (12%)	7 (17%)	23 (54%)	42
Corte Madera	129 (17%)	114 (15%)	152 (20%)	363 (48%)	758
Fairfax	43 (21%)	33 (16%)	41 (20%)	88 (43%)	205
Larkspur	187 (19%)	147 (15%)	196 (20%)	452 (46%)	982
Mill Valley	174 (19%)	137 (15%)	174 (19%)	431 (47%)	916
Novato	635 (18%)	529 (15%)	706 (20%)	1,658 (47%)	3,528
Ross	11 (16%)	10 (14%)	11 (16%)	40 (54%)	72
San Anselmo	60 (20%)	48 (16%)	60 (20%)	134 (44%)	302
San Rafael	570 (21%)	407 (15%)	543 (20%)	1,194 (44%)	2,714
Sausalito	40 (19%)	30 (14%)	43 (20%)	100 (47%)	213
Tiburon	107 (17%)	88 (14%)	107 (17%)	328 (52%)	630
County Remainder	28 (18%)	22 (14%)	29 (19%)	76 (49%)	155
Total County	1,991 (19%)	1,570 (15%)	2,069 (20%)	4,887 (46%)	10,517

Source: Association of Bay Area Governments (December, 1983)

Between January, 1980 and December, 1987, a total of 12 new housing units have been constructed in Ross, all at prices affordable to above moderate income households. Thus, the remaining total housing need in Ross is 60 units (72 units minus the 12 units built over the past eight years).

AVAILABLE LAND INVENTORY AND HOUSING NEED

Overview of Available Land and Development Potential

The goals, policies and programs for housing for the Town of Ross must be viewed in the context of the community's existing development pattern and charm, it's desire to maintain the Town's "small town", low-density character, the minimal number of sites available for development, the significant environmental constraints affecting most of the remaining developable land, and the high cost of land and housing in the community. The Town's housing strategies recognize these conditions by designating appropriate densities on the Land Use Plan (Figure 3) consistent with these factors. The Town's housing goals, policies and programs are consistent with these other aspects of the General Plan. Town housing strategies include allowing second units to increase rental housing in the community and participating in county-wide programs, such as Community Development Block Grant decisions. In addition, the Town has specifically targeted potential re-use of the Ross General Hospital site for possible high density housing.

Vacant, undeveloped land in the Ross Planning Area totals approximately 224 acres (149 acres located west of Sir Francis Drake Boulevard; and 75 acres located east of Sir Francis Drake Boulevard). The vacant land is divided into the following categories: (1) 7.25 acres zoned R-1:B-10, which allows single family lots down to 10,000 square foot in size, with development of an estimated 3-14 additional units possible; (2) 0.50 acres zoned R-1:B-20, which allows single family lots down to 20,000 square foot in size, with development of an estimated 1 additional unit possible; and (3) 216.84 acres zoned R-1:B-A, which allows single family lots with

down to one acre in size, with development of an estimated 45-65 additional units possible. Vacant parcels are shown in Figure 5.

While the total amount of vacant land zoned for residential use may seem large, 52% of this amount is contained in three major land holdings adjacent-to or part-of Bald Hill. Additionally, almost all of the remaining vacant land is located on steeply sloping hillside areas, with limited residential development potential based on site or area constraints and current Town ordinances. These constraints, whether limited water supply or environmental constraints, are discussed in more detail in other parts of the plan. There are very few vacant parcels located in the flatter portions of the Town. Thus, the total development capacity within the Town of Ross amounts to between 48 and 80 additional homes, all of which are at lot sizes of one-quarter acre or larger, with most being one acre or larger in size. This estimate is based on site constraints, Town development requirements and available land. Further, it is entirely possible that the Town could be completely "built out" by the year 2005.

In general, the capacity of existing water facilities and the water distribution system and available water pressure are currently inadequate to serve additional development in the hillside areas of Ross. The primary area affected is Bald Hill. The existing 22,000 gallon tank in the Bald Hill area can serve development to MMWD standards between the 260 to 430-foot elevation, however, a 50,000 gallon tank would be needed to serve additional development in that area. Figure 11 shows water flow and storage tanks in Ross. Hillside areas are also subject to other constraints, such as geologic hazards, road capacity, access as well as generally steep slopes and rugged terrain. Areas subject to environmental hazards are described in more detail in the Safety Background section of the Plan.

With these significant constraints for providing various housing types in the community, the two acre portion of the Ross General Hospital site located in the Town of Ross is critical to the community for meeting housing needs, especially for affordable elderly housing, if possible, and complying with the requirements of state law for providing a variety of types of housing and demonstrating an ability to meet its total housing need. The General Plan designates the two acre portion of the existing Ross General Hospital site that is in the Town for higher density housing (15 to 20 units per acre). Thus, this site has the potential to provide between 30 and 40 mutliple family housing units and the Town can demonstrate an ability to provide a variety of housing types as required by state law. Further, the General Plan proposes the inclusion of the remainder of the site in the Town's Sphere of Influence and, if annexed, this remaining portion of the site could add between 75 and 100 multiple family units at 15-20 units per acre.

The Town can demonstrate its ability to meet its total housing need (a total need of 60 units, including 32 low and moderate income units and 30 above moderate income units) by designating the two acre portion of the Ross General Hospital site for higher density housing, with 30-40 units possible, and through development of the estimated unconstrained parcels remaining in Town, 30-50 units possible in the remaining areas of Ross. Potential second units would also provide additional moderate income housing.

The entire Ross General Hospital site does not have major constraints for development as compared to many other potentially developable parcels in the Town. Specific policy language included in the Plan is as follows:

H-7 **Ross General Hospital Site.** The 2 acre portion of the Ross General Hospital site located in the Town of Ross is designated for higher density residential use (15 to 20 units per acre). If the entire property is annexed to the Town of Ross (see Policy LU-2), the policies and programs in the General Plan shall apply to the entire site. The site will be rezoned to a higher density or planned district classification, with final density to be established after complete analysis of site constraints and compliance with the development standards of this plan to be done as part of the development application review process. The Town will offer incentives as part of the Town's review of the development application if additional low and moderate income units are provided over and above those required under the Town's inclusionary requirement (see Policy H-6, above). Those incentives include density bonuses over 15 units per acre up to but not exceeding 20 units per acre, fast-track processing and reduction or waiver of some fees. The Town will also explore ways of using appropriate federal or state financing programs or non-profit housing assistance to reduce the costs of the units. Any programs that provide below market rate housing should guarantee the long-term affordability of the units through resale deed restrictions or other means. Any re-use of the site for institutional use shall not increase traffic above its current level, and provision of adequate parking must be ensured. Location and traffic conditions suggest that an ideal re-use would be housing for low-and moderate-income seniors, a type of housing greatly needed in the area.

This designation is consistent with the recently county-adopted Kentfield/Greenbrae Community Plan's designation for the remaining portion of the property (for additional information see the discussion of the Ross General Hospital Site in the Land Use Background section). The Town of Ross General Plan also has an inclusionary requirement that would be applicable if the Ross General Hospital site is redeveloped. Below is an excerpt of the inclusionary requirement in the Plan:

H-6 **Inclusionary Requirement.** Residential projects of 10 or more lots or units shall be required to provide at least 15% of the units affordable to low-and moderate-income households. The Town will coordinate with the Marin County Housing Authority in establishing eligibility requirements, resale controls and other special requirements in implementing this policy.

Second Units

Second units are also a potential source of additional affordable housing. The Town of Ross adopted a Second Units Ordinance that establishes procedures and requirements for second units. Some of the primary requirements in the Town's Second Unit Ordinance are described below. Additional information is provided on the standards used by other Marin County communities.

(1) **Unit Type:** The Town of Ross second unit ordinance requires that the unit be attached to the primary unit (no detached units are allowed). Most Marin cities allow new detached second units (including Belvedere, Corte Madera and San Anselmo). Fairfax, San Rafael and Tiburon only allow detached units when existing units are legalized. Novato allows detached units on lots of 10,000 square feet or larger.

(2) **Use Permit Controls:** The Town requires a Use Permit for all second units. This allows the Town to place special requirements on any particular application. Use Permits are also required by all other jurisdictions in the county.

(3) **Size of the Second Unit:** The Town of Ross requires that any increase in floor area must not exceed 10% of the existing living area. Other jurisdictions in the county control the size of the unit either by placing a maximum percentage (ratio) of the second unit to the primary unit or by establishing a maximum square footage size for the unit. Examples of the former include Fairfax (33% of main house), San Rafael (40% of floor area up to 1,000 square feet, and Novato (35% of floor area up to 550 square feet for contained units; 50% of floor area up to 750 square feet for attached units; and 60% of floor area up to 1,000 square feet for detached units). Examples of the latter approach include Belvedere (750 square feet), Corte Madera (700 square feet), Larkspur (700 square feet; must also be studio or one-bedroom unit), Mill Valley (700 square feet, and Tiburon (700 square feet).

(4) **Owner-Occupancy Requirement:** The Town requires that the applicant be an owner-occupant and must continue to reside on the property. This is required of all Marin County cities.

(5) **Parking Standards:** The Town of Ross requires that the applicable parking standards for the zoning district that apply to the primary unit also apply to the second unit. Thus, second units can be required to provide between two and four spaces, depending on the zoning designation of the property. Most other jurisdictions have specific parking standards for second units which are separate from the requirements in any particular zone. Below is a summary of parking requirements in other Marin County cities:

Belvedere: Three spaces per lot, or to equal the total number of cars owned by owner and tenant, whichever is less. Parking may be located on contiguous lot if owned by the same owner of record.

Corte Madera:

a. One additional space for studio and one-bedroom units, unless three plus spaces already exist.
b. Two additional spaces for two-bedroom units, unless four plus spaces already exist.
c. If paved street is less than 26 ft. wide, at least two spaces must be available for primary unit in addition to those required for the second unit.

d. One space may be located within the front setback between the existing driveway and the closest side property line, if that portion of the site has less than a 10% slope.
e. May be uncovered but not tandem

Fairfax: One additional space. If this is infeasible on the site, an easement for parking at another nearby location may be substituted if approved by the town.

Larkspur: One non-tandem space for the second unit, in addition to two spaces for the primary dwelling and two guest spaces.

Mill Valley: Two additional spaces required for the second unit, one of which may be partially or completely located within the city right-of-way on the driveway apron.

Novato: One space for the second unit plus two for the primary house.

San Anselmo: Compliance with zoning standards

San Rafael: Parking in addition to two required spaces for the primary house:
a. One space for studio and one-bedroom unit
b. Two spaces for two-bedroom unit
c. Parking may be uncovered but not tandem. It may be located within the front setback if on the driveway apron, and does not block access to primary house's parking.

Tiburon: Two additional non-tandem spaces required. Exceptions may be granted if all of the following conditions apply:
a. Second unit occupants own no vehicles;
b. Parcel has limited space for parking;
c. Compliance with parking requirement would cause more of a disturbance to neighborhood than non-compliance; and
d. Traffic and parking congestion will not result from the exception to the requirement.

A mail survey of homes in Ross was undertaken in October, 1981 as part of the previous Housing Element work. The survey indicated that 199 households in Ross provide housing for live-in employees (caretakers, gardeners, maids, "au pairs", etc.) either in separate units on the property or in rooms within their home. Almost all of these employees did not pay any rent for their housing. The survey also indicated that 52 households rent rooms in their homes or separate units on their property. The amount charged for these rentals averaged $283 per month.

POTENTIAL CONSTRAINTS TO PROVIDING HOUSING

Potential Governmental Constraints

Ross regulates the use of land within the City limits through the General Plan, Zoning Ordinance, Subdivision Ordinance, and Building Code. The Town processes development permits through similar procedures as other jurisdictions in Marin County. Generally, Ross's zoning ordinance only permits housing at lower densities than are allowed elsewhere in Marin County. However, this should be viewed in light of the significant environmental constraints affecting most of the parcels in the Town and the historic density of development that has occurred in the Town. A major part of the charm of Ross is derived from the low density of development and the natural setting. On the next page are tables comparing the zoning regulations of various cities in Marin County.

Town of Ross Zoning Summary

Zone	Name	Lot Size			Cov	Setbacks			Ht	Pkng
		Area	Width	Depth		Front	Rear	Side		
R-1	Single Family	5,000 sf	50 ft	100 ft	20%	25 ft	40 ft	15 ft	30 ft	2/unit
R-1:B-6	Single Family	6,000 sf	50 ft	100 ft	20%	25 ft	40 ft	15 ft	30 ft	2/unit
R-1:B-7.5	Single Family	7,500 sf	70 ft	100 ft	20%	25 ft	40 ft	15 ft	30 ft	2/unit
R-1:B-10	Single Family	10,000 sf	85 ft	100 ft	20%	25 ft	40 ft	15 ft	30 ft	3/lot
R-1:B-15	Single Family	15,000 sf	100 ft	100 ft	15%	25 ft	40 ft	18 ft	30 ft	3/lot
R-1:B-20	Single Family	20,000 sf	120 ft	100 ft	15%	25 ft	40 ft	20 ft	30 ft	3/lot
R-1:B-A	Single Family	1 ac	150 ft	100 ft	15%	25 ft	40 ft	25 ft	30 ft	4/lot
C-L	Local Serv Comm	None	None	None	None	None	None	None	30 ft	1/250 sf
C-D	Civic	None	None	None	None	None	None	None	None	None
C-C	Community Cult	1 ac	150 ft	200 ft	25%	25 ft	40 ft	15 ft	30 ft	2 sf/1 sf
F	Floodway	None	None	None	None	None	None	None	None	None
P-F	Public Facility	None	None	None	None	None	None	None	None	None
O-S	Open Space	None	None	None	None	None	None	None	None	None

Source: Ross Municipal Code

Comparison with Other Marin County Jurisdictions
Small Lot Zoning

Jurisdiction	Zone	Name	Lot Size			Cov	Setbacks			Ht	Pkng
			Area	Width	Depth		Front	Rear	Side		
Ross	R-1	Single Family	5,000 sf	50 ft	100 ft	20%	25 ft	40 ft	15 ft	30 ft	2/unit
Novato	R-1:B-1	Single Family	6,000 sf	50 ft	75 ft	40%	25 ft	10 ft*	5-6 ft	30 ft	2/unit
San Rafael	R-1	Single Family	5,000 sf	50 ft	None	40%	15 ft	10 ft	3-5 ft*	30 ft	2/unit
Marin County	R-1:B-1	Single Family	6,000 sf	50 ft	None	30%	25 ft	25 ft*	5 ft	35 ft	3/lot
Mill Valley	RS-6	Single Family	6,000 sf	60 ft	None	40%	15 ft	15 ft	5 ft	30 ft	3/lot
Fairfax	RD 5.57	Resid (1-2 u)	5,500 sf	60 ft	None	None	6 ft*	6 ft*	5 ft*	35 ft	2/unit

*Special variations depending on circumstances

Source: Zoning Ordinances of Jurisdictions, 1987

Comparison with Other Marin County Jurisdictions
Large Lot Zoning

Jurisdiction	Zone	Name	Lot Size				Setbacks				
			Area	Width	Depth	Cov	Front	Rear	Side	Ht	Pkng
Ross	R-1:B-A	Single Family	1 ac	150 ft	100 ft	15%	25 ft	40 ft	25 ft	30 ft	4/lot
Novato	B-4	Combining	1 ac	150 ft	150 ft	Zone	30 ft	30 ft	20 ft	Zone	Zone
	B-5	Combining	5 ac	200 ft	200 ft	Zone	30 ft	30 ft	30 ft	Zone	Zone
	B-10	Combining	10 ac	200 ft	200 ft	Zone	30 ft	30 ft	30 ft	Zone	Zone
	B-15	Combining	15 ac	250 ft	250 ft	Zone	40 ft	40 ft	40 ft	Zone	Zone
	B-20	Combining	20 ac	250 ft	250 ft	Zone	50 ft	50 ft	50 ft	Zone	Zone
	B-40	Combining	40 ac	500 ft	500 ft	Zone	50 ft	50 ft	50 ft	Zone	Zone
	B-60	Combining	60 ac	500 ft	500 ft	Zone	50 ft	50 ft	50 ft	Zone	Zone
San Rafael	R-1:B-4	Single Family	1 ac	150 ft	None	40%	25 ft	10 ft	15 ft	30 ft	2/unit
Marin	B-4	Combining	1 ac	150 ft	None	Zone	30 ft	Zone	20 ft	Zone	Zone
County	B-5	Combining	2 ac	150 ft	None	Zone	30 ft	30 ft	30 ft	Zone	Zone
	B-6	Combining	3 ac	175 ft	None	Zone	30 ft	30 ft	30 ft	Zone	Zone
	B-7	Combining	5 ac	200 ft	None	Zone	30 ft	30 ft	30 ft	Zone	Zone
	B-8	Combining	10 ac	200 ft	None	Zone	30 ft	30 ft	30 ft	Zone	Zone
Mill Valley	RS-43	Single Family	1 ac	150 ft	None	25%	15 ft	15 ft	10 ft	30 ft	2/unit
	RS-3A	Single Family	3 ac	150 ft	None	10%	15 ft	15 ft	10 ft	30 ft	2/unit
	RS-5A	Single Family	5 ac	150 ft	None	7%	15 ft	15 ft	10 ft	30 ft	2/unit
	RS-10A	Single Family	10 ac	150 ft	None	4%	15 ft	15 ft	10 ft	30 ft	2/unit
Fairfax	MP	Master Plan	Determined through the development review process								

(Note: All communities have special hillside or hazard zoning to regulate hillside development)

Source: Zoning Ordinances of Jurisdictions, 1987

As can be seen in the tables above, the Town's development requirements for larger lots are generally the same as other Marin County jurisdictions. The Town's requirements for smaller lots, however, are slightly more restrictive, especially for side yard setbacks. Other requirements, such as on-and off-site improvements, parking requirements, building, fire and other code requirements are similar to other jurisdiction requirements in the county. Manufactured housing is allowed on single family lots, however, almost all remaining lots are in steeply sloping areas which are generally not appropriate for manufactured housing because of the need for design flexibility to respond to site constraints and potential hazards.

The tables below show a comparison of fees. Generally, the Town of Ross has significantly lower fees than other jurisdictions in the county for normal permits. Many communities in the Bay Area also charge impact fees for traffic improvements, schools, public facilities, etc.

Summary Comparison of Selected Fees of Various Marin County Jurisdictions* 1987

Jurisdiction	Variance	Use Permit	Zoning Amend	5-Lot Subdivision Tentative	Final Map	Lot Line Adjustment	Initial Study	Appeals
Ross**	$300	$300	$300	$500	$400	$300	$100	$50
Marin County	$675	$850	$2,200	$2,420	$1,000	$140	$300	$150
San Rafael	$350	$350	$625	$1,550	$750	$175	$225	$75
Belvedere	$150	$150	$250	$500	$0	$150	$140	$75
Tiburon	$200	$500	$750	$1,000	$500	$250	$50+	$250
Mill Valley	$425	$425	$850	$975	$0	$225	$225	$50
Larkspur	$200	$200	$250	$300	$250	$100	$100	$0
Sausalito	$300	$400	$55/hr	$700	$100	$200	$300	$100

*Fees are generalized to provide comparison (fees can vary depending on the size of the project, other approvals needed, other department review, etc.

**Fees for the Town of Ross reflect updated fees as of March, 1988

Source: Fee Schedules of Jurisdictions, 1987

MEDIAN PER UNIT IMPACT FEES FOR SINGLE FAMILY UNITS IN 23 SELECTED BAY AREA CITIES (1987)

Fee	1987 Median	Percent of Cities Imposing Fee 1981	1987
Park Fee	$1,098	70%	70%
Residential Construction Tax	$501	43%	43%
School Impact Fee	$2,151	39%	39%
Street Improvements	$129	0%	26%
Traffic Mitigation	$835	4%	17%
Public Facilities	$1,128	9%	9%
Low-Income Housing	$1,004	4%	9%
Growth Management	$525	4%	4%

Notes: Medians for each fee are based only on cities that charge that fee; cities not imposing a fee are considered "not applicable"

Source: Bay Area Council, 1987

Summary and Conclusions Regarding Potential Government Constraints

Building Codes and Enforcement: The Town utilizes and enforces the requirements of the Uniform Building Code. Building Code requirements and enforcement are similar to other Marin County jurisdictions and do not pose a special constraint to housing.

Off-Site Improvement Requirements: The Town does not require off-site improvements, such as water system, street or drainage improvements, any more stringent than those required in other communities in Marin County and, thus, they do not pose a constraint to housing. In fact, requirements imposed by the

Town are probably less onerous than impact fees charged by other communities to pay for major traffic or other improvements.

Processing and Permit Procedures: Generally, development applications can be acted on relatively quickly through policies and procedures established in the Zoning Ordinance and Uniform Building Code. Most applications can be acted on within one month of submittal. Applications requiring Town Council approval, such as Use Permits and Variances, are usually scheduled for the next Council meeting. The General Plan proposes a program action (identified as Program CD-f) to review and evaluate possible changes to the Town's variance procedures and standards. The purposes of this evaluation are to establish procedures aimed at minimizing overbuilding of existing lots and maintaining moderate income housing.

Land Use Controls: The following discussion addresses potential constraints for housing from overall land use policies and controls and second units.

(1) **Overall Land Use Policies and Controls:** The Town's land use controls established through the General Plan and Zoning Ordinance are intended to maintain an overall low-density and high environmental quality in the community. In general, the Town's land use policies and controls are necessary to address the significant environmental constraints on remaining developable properties and they do not pose an unnecessary constraint for housing. Nevertheless, the General Plan addresses land use controls as a potential constraint by designating the two acre portion of the Ross General Hospital site located in the Town of Ross for higher density housing (15-20 units per acre) in recognition of the Town's housing needs.

(2) **Second Units:** A comparison of the Town's second unit ordinance with other communities in the county indicates that some consideration could be given to reducing parking requirements, which, in effect, require that each second unit provide the same number of spaces as the primary unit, even though the secondary unit is required to be no more than 10% of the size of the primary unit. In some areas, such as the R-1:B-A zone (one acre minimum lot size), this can result in a requirement of four additional parking spaces. By comparison, Belvedere requires a maximum of three spaces and Tiburon requires a maximum of two spaces. Both of these communities also allow for exceptions.

Another possible constraint for second units is the size requirement. Utilizing a 10% size of unit requirement, whereby the second unit cannot be more than 10% of the primary unit, the Town's existing Second Unit Ordinance is generally more restrictive than other communities in the county. Consideration could be given to changing the size requirement to a maximum square footage, such as 700 or 750 square feet as is used by Marin County, Belvedere, Corte Madera, Tiburon, Larkspur and Mill Valley.

Fees: The fees charged by the Town are significantly lower than the fees charged by other Marin County jurisdictions, as shown in previous table, and do not pose a constraint for housing.

Potential Non-Governmental Constraints

The cost of land in Ross and all of Marin County is very high. In addition, there is a minimal amount of vacant land within the Town of Ross. Parcel size, topography and location are all factors in determining land values. The price for an unimproved parcel within the Town may range from $300,000 to $500,000.

Construction costs have also risen in recent years. Several factors are directly responsible, including increased labor and materials prices, and costs associated with local government review, geotechnical conditions or site construction difficulties. Mortgage interest rates dropped sharply after several years at high levels in the early 1980's. Below is a comparison of the the income required to purchase a home in the Bay Area.

Income Required to Purchase a Bay Area Home
1987

Cost Items	Marin County Median Home Price	Bay Area Median Home Price	Cost of Lower Priced Unit
Sales Price	$212,000	$166,011	$125,000
Closing Costs	$8,480	$6,640	$5,000
Down Payment @ 20%	$44,096	$33,202	$25,000
Mortgage Balance	$176,384	$139,449	$105,000
Annual Principal/Interest @ 9.5% (25 years)	$18,689	$14,776	$11,126
Insurance	$1,000	$600	$500
Taxes	$2,374	$2,025	$1,525
Total Annual Carrying Cost	$22,063	$17,401	$13,151
Income Needed (@30%)	$73,543	$58,003	$43,836
Percent of Marin Median Income	200%	160%	120%

Source: Ecumenical Association for Housing, 1987

In the late 1970's and early 1980's home buyer's also were confronted with high mortgage rates, which were at about 14% to 15% for a 30-year fixed rate loan. High interest rates make qualifying for a loan extremely difficult. The table below illustrates payments at various rates.

MONTHLY PAYMENT ON A $120,000 HOUSE
(@ 30 Year Fixed $100,000 Mortgage)

Interest Rate	Payment	Needed Income
9%	$805	$29,272
11%	$952	$34,618
13%	$1,106	$40,218
15%	$1,264	$45,964
17%	$1,426	$51,854

Source: Jeffery Baird and Associates (1988)

OPPORTUNITIES FOR ENERGY CONSERVATION

Due to improved state conservation standards, homes built after 1975 use about half the energy of homes built before then. These standards are implemented through the Building Code. Older homes can also become energy-efficient through retrofitting efforts. Both the Marin Citizens for Energy Planning and PG & E offer retrofit programs to Marin County residents.

NATURAL ENVIRONMENT BACKGROUND

NATURAL ENVIRONMENT
BACKGROUND

NATURAL ENVIRONMENT BACKGROUND

INTRODUCTION

For general planning purposes the Town of Ross can be characterized as having two main areas: upland hillsides and ridgelines; and the valley floor. Ross's early development mostly occurred on the valley floor, but subsequent growth has occurred in the upland areas. These areas are characterized by unique scenic qualities, vegetation and wildlife habitat, safety concerns and development constraints and patterns.

Many of the qualities of Ross are typical of areas in the coast range mountains. For instance, the vegetation includes wooded ravines, heavy underbrush and some open grassy areas as is typical of nearby areas. The Town also has a unique character resulting from the long avenues of large shade trees. The street trees in Ross establish a special ambiance throughout the Town by providing dense shade and an unmistakable architectural quality.

The Natural Environment Background discussion identifies the lands, waters, air quality, wildlife, scenic, and other factors that are important to Ross's quality of life. Additionally, retention of certain lands in open space provides protection against natural hazards which will be identified in the Health and Safety portion of the Plan. This sections includes the following parts:

- Introduction
- State Guidelines and Requirements for Open Space and Conservation Elements
- Vegetation and Wildlife
- Climate and Air Quality
- Water Quality
- Scenic Areas
- Open Space Preservation
- Management and Use of Open Space Lands
- Archaeological Resources

STATE GUIDELINES AND REQUIREMENTS FOR OPEN SPACE AND CONSERVATION ELEMENTS

Open Space Element Requirements

An Open Space Element has been required as part of local General Plans since 1970. In enacting this requirement, it was the intent of the State Legislature to assure that cities and counties recognize that open space land is a limited and valuable resource and to assure that every city and county will prepare and carry out an open space plan.

Although it is required that all local development approvals, denials, or restrictions be consistent with the General Plan, this is given special emphasis for open space considerations. State Government Code §65566 requires that: "Any action by a county or city by which open-space land or any interest therein is acquired or disposed of or its use restricted or regulated. . . must be consistent with the local open space plan." Government Code §65567 further requires that: "No building permits may be issued, no subdivision map approved, and no open-space zoning ordinance adopted, unless the proposed construction, subdivision or ordinance is consistent with the local open-space plan." State policy on open space land is as follows (Government Code §6556l):

1. The preservation of open space land is necessary not only for the maintenance of the economy of the State, but also for the assurance of the continued availability of land for the production of food and fiber, for the enjoyment of scenic beauty, for recreation and for the use of natural resources.

2. Discouraging premature and unnecessary conversion of open space land to urban uses is a matter of public interest and will be of benefit to urban dwellers because it will discourage noncontiguous development patterns which unnecessarily increase the costs of community services to community residents.

3. The anticipated increase in the population of the State demands that cities, counties, and the State at the earliest possible date make definite plans for the preservation of valuable open space land and take positive action to carry out such plans by the adoption and strict administration of laws, ordinances, rules and regulations.

4. In order to assure that the interests of all its people are met in the orderly growth and development of the State and the preservation and conservation of its resources, it is necessary to provide for the development by the State, regional agencies, counties and cities, including charter cities, of Statewide coordinated plans for the conservation and preservation of open space lands.

5. An open space plan is necessary for the promotion of the general welfare and for the protection of the public interest in open space land.

To implement this policy, the State Government Code and the Office of Planning and Research have established guidelines for the open space issues to be addressed in general plans. The following citation from Government Code §65560 summarizes the intent:

> Open space land is any parcel or area of land or water which is essentially unimproved and devoted to an open space use as defined in this section, and which is designated on a local, regional or state open space plan as any of the following:
>
> 1. Open space for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and watershed lands.
>
> 2. Open space used for the managed production of resources, including but not limited to, forest lands, rangeland, agricultural lands and areas of economic importance for the production of food or fiber; areas required for recharge of ground water basis; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply.
>
> 3. Open space for outdoor recreation, including but not limited to, areas of outstanding scenic, historic and cultural value, areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open space reservations, including utility easements, banks of rivers and streams, trails and scenic highway corridors.
>
> 4. Open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, floodplains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.

Conservation Element Requirements

A Conservation Element has been required as part of local general plans since 1970 as well. The Conservation Element overlaps those categories of the Open Space Element that deal with "open space for the preservation of natural resources" and "open space for the managed production of resources". The following citation from the State Government Code §65302 (d) summarizes the intent:

> A Conservation Element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries,

wildlife, minerals, and other natural resources. That portion of the Conservation Element including waters shall be developed in coordination with any countywide water agency and with all district and city agencies which have developed, served, controlled or conserved water for any purpose for the county or city for which the plan is prepared.

Conservation should prevent the wasteful destruction and neglect of Ross's natural resources, particularly scarce resources. This philosophy is consistent with the intent of the California Environment Quality Act (CEQA) and National Environmental Protection Act (NEPA).

VEGETATION AND WILDLIFE

Grasslands

The grassland community is fairly limited within the Town, and is found primarily on Bald Hill. It is comprised of two sub-classes of plant species: native perennial grasses and exotic annual grasses. The early Californian grassland species were largely composed of perennial bunch grasses such as purple needle grass and blue bunch grass. Introduced grassland species include: red broom, wild oats, barley, wild rye and pampas grass. Hillside grasslands have particular value for both watershed and soil conservation. In addition, they provide habitat for numerous predatory and soaring birds (such as the red-tailed hawk and black-shouldered kite), rodents, reptiles, amphibians, insects and mammals. Some of the mammals which utilize grassland habitats include rabbits, badgers, burrowing rodents, skunks, bats, coyotes and bobcats.

Oak Savanna/Woodlands

The oak savanna and oak woodland communities are closely related and are distinguished by the amount of tree coverage. Oak savanna is comprised of open grasslands with isolated or scattered oak trees. The oak woodland community, on the other hand, is comprised of 30% or greater tree cover, which may include coast live oak, bay oak, California bay, madrone and buckeye trees. The understory includes different herbaceous species such as minor's lettuce, wild iris, wild strawberry and grasses, depending on the amount of sun exposure. Common shrubs include California toyon and poison oak. The oak savanna and woodland communities provide habitat for diverse populations of insects, mammals, predatory and song birds. In addition to their wildlife habitat value, oak woodlands are important in soil development and watershed protection. Redwood groves are typically found within the area in swales and valleys which contain natural seepage or springs.

Riparian Areas

Riparian woodland communities are located along creeks and streams. As the name implies, they are water-dependent communities and commonly include plants such as willows, buckeyes, conifers, mugwort and poison oak. Riparian areas represent an important source of water and habitat for mammals, birds and amphibians. Riparian environments are particularly sensitive to bank erosion and seasonal changes in stream levels. Seasonal creeks and drainageways provide corridors for movement of animals as well as likely paths of downstream flows of landslide debris.

Developed Areas

Developed area landscaping, as found in private gardens, parks and street-tree plantings provides a rich visual amenity to the Town of Ross. Landscaping is used to provide visual relief in the "townscape" and for screening of residences. In addition to its aesthetic value, developed area landscaping reduces ambient temperatures through shading, and increasing the amount of pervious surface, thereby reducing the amount of storm drainage runoff. Landscaping includes a diverse array of native, introduced and ornamental plants. This vegetation in turn provides habitat for songbirds, insects, amphibians and some small mammals. Large, mature, non-natives such as elms are valued as highly as natives, and their loss from disease or damage from development are of equal concern.

In 1985, the Town commissioned the preparation of a Street Tree Management Plan to preserve the unique tree heritage of the Town. There are over 2,000 publicly-owned trees in the Town of Ross, including those planted in parks and native trees growing along the sides of winding back roads.

Threatened and Endangered Species

The state and federal governments have established lists of threatened and endangered species based on scarcity of numbers, reduction of habitat or range, overutilization, disease or predation, jeopardy to reproduction and inadequacy of regulatory protections. Both the state and federal government use the term "endangered" to denote species in greatest danger of extinction. "Threatened" is a lessor category. Both the federal and state governments also have lists for species which may be elevated at a later date to endangered or threatened status. The State of California also monitors "species of special concern" which are species whose populations are decreasing.

According to the California Natural Diversity Data Base three plant species, the Marin knotweed (Polygonum marinense), Santa Cruz tarplant (holocarpha macradenia), and Hoover's semaphore grass (Pleuropogon hooverianus), and one animal species, saltmarsh harvest mouse (Reithrodontomys raviventris) were historically found in the general vicinity of Corte Madera Creek. Both Marin knotweed and saltmarsh harvest mouse are dependent upon salt marsh habitat and, therefore, would not be located in Ross.

The Santa Cruz tarweed (Federal Candidate 1; California-listed Endangered) is no longer found in the Ross Valley. Hoover's semaphore grass (Federal Candidate 2; California-listed Rare) is endemic to grassy meadows and mixed evergreen flats. It is presumed still present in Ross according to the California Natural Diversity Data Base (1987).

CLIMATE AND AIR QUALITY

The Ross Planning Area is subject to a Mediterranean, or a dry summer, sub-tropical climate with moderately wet winters. Temperatures are pleasant and moderate, with a range from an average daily minimum of 43^{o} in January to an average daily maximum of 79^{o} in July. Rainfall in Ross and nearby Kentfield is the highest recorded for a populous area in the county, with an average 52.5 inches per year compared to 40.1 in San Rafael. In recent years the annual average rainfall for the area has been higher than the historical average. The adjacent hills provide protection from winds. Different microclimates exist within the Planning Area due to local geographic and topographic conditions.

Air Quality Regulations and Considerations

Air quality is regulated at the federal level by the Environmental Protection Agency (EPA) and at the state level by the California Air Resources Board (ARB) and the Bay Area Air Quality Management District (BAAQMD). The BAAQMD monitors air quality in Marin County through its ambient air monitoring station at 534 Fourth Street in downtown San Rafael. The station is equipped to measure ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide and particulates. The district also has permit authority over certain types of facilities which include, but are not limited to, the following: dry-cleaning plants, service stations, research and development facilities, land fills, sewage treatment plants and industrial plants.

Elevated concentrations of air pollutants can have adverse health effects on humans; these effects are more likely to be found in sensitive receptors. High concentrations of ozone produce eye irritation and impair respiratory function. Elevated concentrations of CO impair oxygen transport in the bloodstream, aggravate cardiovascular disease, impair central nervous system functions and cause fatigue, headache, dizziness and confusion. Long exposure to high TSP concentrations can interfere with respiratory function and, in combination with atmospheric sulfur dioxide (SO_2), can produce acute illness.

Existing Air Quality Conditions

Marin County in general has historically had good air quality conditions, with infrequent violations of air quality standards. For the two-year period between 1982 and 1984, the California ambient air quality standard for suspended particulates was exceeded on only two occasions and federal standards were not exceeded. The state standard for particulates is 100 micrograms per cubic meter in a 24-hour averaging time and the federal primary standards, which represent an annual average of particulates, is 75 micrograms per cubic meter annual geometric mean. Sources of particulates include construction activity and vehicular traffic (tail-pipe emissions and resuspension from roads). Over the past five years, the air quality standards for ozone, carbon monoxide, nitrogen dioxide and sulfur dioxide were not exceeded.

In general, the relatively clean air quality in Marin County in general and the Town of Ross is attributed to a lack of major point sources in the immediate vicinity, and an upwind location from the South and East Bay emission sources. Vehicular traffic emissions are the main source of air pollutants in the Ross area.

Sensitive Receptors

The most important reason to set air quality standards is to avoid adverse health impacts to the most sensitive members of the population. The term "sensitive receptor" refers both to sensitive population groups (children, senior citizens, and acutely or chronically ill people) and to the facilities where these groups of people reside or spend a substantial amount of time (schools, playgrounds, childcare centers, residences, retirement homes, convalescent homes, hospitals and clinics).

The most likely potential sensitive receptor to suffer from elevated pollutant concentrations from local sources is Ross General Hospital. The hospital is within 500 feet of Sir Francis Drake Boulevard, where elevated CO concentrations could occur during peak-hour traffic. High CO levels are most likely when high traffic volumes and low traffic speeds coincide with adverse meteorological conditions, such as those that occur during midwinter late afternoons and evenings.

WATER QUALITY

Corte Madera Creek and its tributaries drain an area of about 28 square miles in Ross Valley. The stream is about 9 miles long extending from the slopes of Pine Mountain to San Francisco Bay. The upper 6 miles are known as San Anselmo Creek. As it passes through the Town of Ross the major tributary is Ross Creek. Phoenix Lake, with a drainage area of about 2 square miles, is impounded at the head of Ross Creek.

The primary source of pollutants in Corte Madera Creek is storm runoff from the urban areas in and around Ross Valley. Urban runoff typically contains pollutants such as petroleum hydrocarbons, heavy metals, suspended solids, trace elements, and floating refuse. Water quality is seasonally variable. The worst water quality typically occurs during the dry summer months of August and September, while the highest quality occurs during the winter months when runoff is high.

According to the Corte Madera Creek Flood Control Project (US Army Corps of Engineers, 1986) the water quality of Corte Madera Creek can be characterized as "moderately good" despite some degredation resulting from intensive development. The stream continues to support small annual runs of steelhead trout and coho salmon which require reasonably high water quality.

SCENIC AREAS

Overall Scenic Qualities

The natural environment and the density of development have created the attractive scenic qualities in the Town of Ross. Spectacular views, vegetation, topography and creeks contribute to the natural beauty of Ross. Unlike other communities in Marin County, the Town of Ross has developed in such a way that in most areas of the Town few residences can be seen. The trees in the Town provide an important visual resource.

Upland Hillsides and Ridgeline Areas

The combination of upland hills, valleys and valley floor create a particularly scenic environment for Ross. Although much of the upland area is either secured as open space or is owned by Marin Municipal Water District, even areas developed with residences generally provide a scenic backdrop as viewed from the valley floor due to a relatively low density of development in upland areas and the heavy vegetative cover which screens residences and provides a natural appearance. Additionally, the ridgelines act as important community separators which enhance the natural qualities of the Town.

Scenic Landmarks

Several natural features in the Town provide important scenic landmarks not only for the Town but for Marin County as a whole. These landmarks help define the urban areas of Marin County and deserve special

attention and preservation. Physical features include Bald Hill which generally coincides with the southwesterly boundary of the planning area, adjacent to the Town of San Anselmo; the ridgeline along Upper Toyon Road; the Ross Hill ridge adjacent to Kent Woodlands; and Corte Madera Creek and its tributaries. The area also maintains a strong visual relationship with Mount Tamalpais as a visual focal point to the south.

OPEN SPACE PRESERVATION

Preservation Techniques

The Town of Ross is situated in the beautiful Ross Valley. The Town's southwesterly limits, designated as part of the planning area, include a large expanse of Marin Municipal Water District lands. Through the years the Town has carefully maintained high standards to ensure open-type low density residential development and the preservation of natural features for scenic and safety reasons. Parks, forest preserves and other open space lands have been acquired by the Town or preserved through scenic easement restrictions or the dedication of property. Examples of various techniques used by the Town of Ross for preserving open space include:

(1) **Upland and Ridgeline Preservation.** The Town has worked toward the protection of upland and ridgeline areas, primarily for safety and scenic reasons. For example, the Town coordinated with the City of San Rafael in helping to secure ridgeline preservation in the Oakwood (Felton) subdivision along the Gerstle Park Ridge in San Rafael that would have impacted the Town of Ross.

(2) **Acquisition:** The Town has acquired such areas as Natalie Coffin Green Park and Ross Common.

(3) **Scenic Easements:** Easements allow for significant property tax reduction for homeowners and the protection of areas from development. They have been incorporated into Town development approvals along Ross Hill.

(4) **Dedication of Open Space:** Lands can be secured by allowing public dedication of open space. The Mudd property, adjacent to Marin Municipal Water District lands, was dedicated to the Marin Park and Open Space Foundation. The action was implemented as a condition of approval for that property's development.

A local benefit assessment district is another technique to secure open space. In this case, homeowners within a defined area of benefit share acquisition costs. The philosophy of the benefit assessment district is that people pay for the benefits they are receiving from the establishment of the district. Properties within the district boundaries are assessed their portion of the costs of the district over a specified time period. The assessment district process has been successful in securing open space in other portions of the county. These districts have usually been formed with financial support from the specific city, the Marin County Open Space District and property owners. The assessment district process can be very successful but it can also be very cumbersome and time consuming.

Other means of securing open space or paying for on-going open space maintenance include: general obligation bonds; establishment of a special Community Facilities District (under the Mello-Roos Community Facilities Act of 1982); grants and other fund raising activities; transfer of development density, as is used by Marin County to protect agricultural land; and the acquisition of the "development rights" of a property, which is a technique used by the Marin Agricultural Land Trust to protect agricultural land in West Marin. This approach serves three purposes: it provides an economic return on the property for the owner; it protects the property from future development; and, it allows agricultural activities to continue on the property.

The success of an open space program is dependent on community initiative and public policy as identified in the general plan and implemented through local ordinances. The Town's development requirements, such as the Town's hillside, special hazard and large-lot zoning, have preserved extensive open areas. Factors considered in implementing Town policy include: high fire hazards in upland areas; hazards associated with steep slopes; geologic hazards; water service and water pressure requirements for adequate fire safety; extension of utilities; narrow roads and poor access; tree removal; and visual impacts. Many of the steeper areas of Ross are either severely constrained by natural hazards or other development limitations, which, in effect, helps preserve large areas in the Town as open space.

Each of the methods described above has worked successfully either in Ross or in other areas of Marin County, although some have worked better than others. There is no way to generalize which is the best method in all cases because it depends on available funding, the characteristics of the specific site and the uses intended for the land. For example, open space secured solely for scenic reasons can remain in private ownership. Where this cannot be achieved, some form of public ownership may be desirable. If the Town became an owner "in fee", however, it could also be burdened with potential liability. Given that there are numerous landslide situations in the upland areas of Ross, repair of these slides would be necessary and costly to an assessment district or to the Town.

Another important consideration in open space protection is coordination with other jurisdictions. The Town Council of San Anselmo, for example, has established the San Anselmo Open Space Committee, which is in the process of identifying potential open space properties in and around San Anselmo. Discussions with Committee members indicate that one of the recommendations in the Committee's report, which is expected to be forwarded to the San Anselmo Town Council in January, 1988, will be to enlist the support of the Town of Ross in helping to secure Bald Hill as open space. The report also identifies other properties along Bald Hill ridge as potential open space as well. The Committee's recommendations, when approved, will include a specific action plan integrating previous discussions held between the two towns

Marin County Open Space District

At a countywide level, the Marin County Open Space District is charged with acquiring strategic open space of countywide significance. The Open Space District was created in 1972 and was given the power to levy a tax of up to 10¢ per $100 of assessed property value to acquire and maintain open space, park and recreational lands. After Proposition 13, however, that amount was cut to 4¢ per $100 of assessed value. Since its beginning, the District has contributed to the acquisition of over 8,000 acres in Marin. District land management now involves 6,200 acres within 20 open space preserves.

The Marin County Open Space District prioritizes land for open space acquisition and preservation. The County actually identifies potential open space land in two categories: Priority "A" areas contain open space acquisition projects "in progress"; Priority "B" areas are areas of priority interest for new open space projects. The County's 1986 "shopping list" includes Bald Hill because it is a key natural landmark.

The County presently uses the following criteria for assessing land for potential open space acquisition:

(1) Fee acquisition projects should be identified in the Environmental Quality Element of the Marin Countywide Plan or other adopted general or specific plans and should be mapped "Upland Ridgeline and Greenbelt Areas".

(2) Projects should have the general support of the local jurisdictions within their sphere of influence.

(3) Acquisition of lands should be undertaken only for projects of District-wide significance.

MANAGEMENT AND USE OF OPEN SPACE LANDS

Purpose of Open Space Management

The purpose of open space management is to preserve and maintain open space for use by the public, and to ensure that these areas will be kept as close to their natural state as possible, without presenting a hazard to public safety. Open space management has significant cost and potential liability concerns for the Town. The Town is responsible for maintenance and patrol of open space areas owned by the Town. Open space management must address a wide range of issues, including:

(1) **Multiple Jurisdictions and Joint Agreements.** All adopted open space involving other jurisdictions should consider various access and use policies. Responsibilities and liabilities should be ascertained.

(2) **Access and Parking:** Potential access points and parking impacts on adjacent residences should be controlled.

(3) **Land Use Policies in Open Spaces.** Specific activities permitted in open space areas may be enumerated.

(4) **Geology & Soils Concerns.** Some open space areas may have soil and geology characteristics which pose higher public safety hazards than others. For example, repair of slide areas may be necessary to ensure public safety. Conversely, access to open space areas with slide potential could be limited to reduce public risk and property damage.

(5) **Fire Protection Concerns.** Currently, some open space areas are closed during fire season to reduce the risk of fires. High potential fire areas should be identified and measures taken to mitigate dangers. Maintenance of fire roads and the planting of fire resistant plants near open space boundaries are examples of fire prevention strategies.

(6) **Vegetation & Wildlife Preservation.** In some cases, programs may be needed to ensure the preservation of plant and animal habitat. Because of grazing pressures and climatic factors, many tree species in open spaces are unable to regenerate. Long-term replacement of trees by management programs may be needed. Animal wildlife is also susceptible to harm through habitat destruction and overgrazing.

Existing Use of Open Space

Activities such as walking, hiking, and enjoying nature are the most common recreational uses of open space areas. Because of fire danger, some open space areas are closed in the summer and public use restricted.

The Marin County Open Space District has established use policies for the open space in which they are involved. Below is an excerpt of the Open Space District's use policy:

> Allowable uses of the open space areas shall be restricted to those uses having no impact or a minimal impact on the natural environment. The use of existing fire roads for horseback riding and hiking is considered a primary use of the open space areas. Pedestrian and equestrian access to these areas should be provided wherever possible and reasonable; however, it is considered desirable to have several minor access points to open space areas as opposed to a few larger concentrated or developed trail-head facilities. The intent is to serve the people in the adjacent communities, but not attract large numbers of visitors by automobile from other areas to utilize the open space.

Open Space Management Responsibilities

Generally, potential management needs can be broken down on a seasonal basis.

Spring: Fire Protection (discing, mowing, grading)
Weed Control
Patrol

Summer: Fire Protection (some areas closed)
Weed Control
Patrol

Fall: Fire Protection
Maintenance of Drains & Culverts
Patrol

Winter: Maintenance of Drains and Culverts
Patrol

Open space areas with geologic hazards are especially problematic. Steeper slopes, higher elevations, and limited accessibility for service present problems. Other problems have to do with use of open space, drainage from open space, and fire hazard abatement.

The Fire Department responds to wildland fires regardless of whether the land is privately or publicly owned. Certain vegetative types are more hazardous, including: chemise (shrubs) vegetation, which is worse than

grassland because shrubs can act as a ladder to carry fire to trees; oak woodland is not as hazardous as grassland or chemise vegetative types because it does not easily ignite. Open space areas which are highly accessible would probably generate more fire calls because they are more susceptible to arson.

Background on Potential Town Liability

Traditionally, governments have been immune from liability, at least for their basic "governmental" functions. However, in the last few decades there has been a trend toward making governments less immune for their wrongful acts through tort liability. A tort is an act (a "wrong") that causes some kind of injury that is not governed by criminal law or by the terms of a contract. Liability is the responsibility which civil law recognizes for wrongful acts or omissions. Therefore, tort liability is the legal responsibility, usually imposed in the form of damages awarded to the injured person, for wrongful actions or omissions that cause harm to someone.

General areas of potential liability exposure include geologic or fire hazards of open space areas to private property, performance of the Town drainage system, and potential for claims regarding site or building design or function of new development approved and inspected by the Town. A recent ABAG study found that local government liability under tort law rests on four principles:

(1) the "reasonableness" of the acts or omissions of the government under the circumstances surrounding a loss, including questions of immunity to liability for "acts of God";

(2) the extent to which the government's officials have attempted to carry out statutory or mandatory duties imposed on a government unit by state or federal governments;

(3) the degree of compliance with affirmative duties, or standards of care created for a governmental unit by its own enactments; and

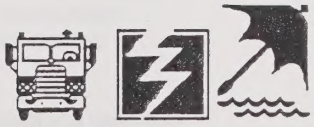
(4) the extent to which the acts or omissions reflected discretionary or high-level decision-making.

Because of uncertainty surrounding interpretations of tort law, local governments have exercised considerable caution regarding their actions because "actual knowledge" of a hazardous situation may create liability if a jurisdiction does not follow-up to eliminate or mitigate the hazardous situation.

ARCHAEOLOGICAL RESOURCES

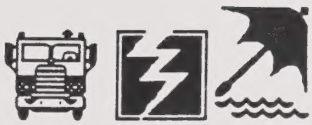
Prehistoric habitation is known to have occurred in the general region of Marin County. The prehistoric peoples who once lived in Marin and adjacent Sonoma County are referred to as the Coast Miwok. The Coast Miwok relied heavily on a hunting and gathering subsistence which was able to support a total population estimated at approximately 2,000.

There are eight known archaeological sites, either temporary campsites or permanent occupation sites, which have been identified in the Town of Ross. These sites are located primarily along Corte Madera Creek. The selected locations likely offered fresh water. The General Plan includes a program action that if an archaeological site is uncovered during construction, activity should be halted and an examination made by a qualified archaeologist in consultation with the American Indian Council of Marin.



SAFETY BACKGROUND

SAFETY BACKGROUND



INTRODUCTION

A large portion of the land within the Ross area is subject to a variety of natural and man-made hazards. In order to protect the public, the General Plan identifies areas where hazards to life and property occur and sets forth protective measures to reduce risk. The intent is that these factors will then be considered in the type, location, design and density or intensity of development in the Town.

The Safety portion of the General Plan is aimed at reducing death, injuries, damage to property and the economic and social dislocation resulting from fire, flood and geologic hazards, and other public health and safety concerns. Emergency preparedness plans for the Town are also reviewed. The intent is not to remove all risks associated with each specific type of hazard, but to reduce risks to life and property and to make informed decisions about development near these hazards. The information will be used as a basis for project review by showing areas where further information for a specific project may be needed. Implementation will also occur through the Town's Zoning Ordinance and review of specific development proposals. Specific topics covered in this section include the following:

- Introduction
- State Guidelines and Requirements for Safety Elements
- Geologic Setting
- Geologic and Seismic Hazards
- Slope Stability Zones
- Geotechnical Review Procedures
- Flood Hazards
- Fire Hazards
- Hazardous Materials
- Emergency Preparedness Planning

STATE GUIDELINES AND REQUIREMENTS FOR SAFETY ELEMENTS

Safety has been required to be addressed as part of local general plans since 1971. The San Fernando earthquake of February, 1971, which claimed 64 lives and resulted in over $500 million in property damage, and the devastating wildland fires in September and October of 1970, were largely responsible for prompting the Legislature to pass this requirement. The General Plan must address each of the relevant hazards listed in the State Government Code §65302 (f):

> A safety element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides, subsidence and other geologic hazards known to the legislative body; flooding; and wildland and urban fires. The safety element shall include mapping of known seismic and other geologic hazards. It shall also address evacuation routes, peak load water supply requirements, and minimum road widths and clearances around structures, as those items relate to identified fire and geologic hazards.
>
> To the extent that a county's safety element is sufficiently detailed and contains appropriate policies and programs for adoption by a City, a City may adopt that portion of the county's safety element that pertains to the City's planning area in satisfaction of the requirement imposed by this subdivision. Each county and City shall submit to the Division of Mines and Geology of the Department of Conservation one copy of the safety element and any technical studies used for developing the safety element.

GEOLOGIC SETTING

Background

The Town of Ross is located in the Coast-Range physiographic province of California, an alternating series of subparallel mountains and valleys located adjacent to the Pacific Coast. The bedrock units that form the range have been disrupted by intense folding, faulting and crushing that occurred when the range was formed by the processes of plate tectonics. The earth's surface consists of a rigid crust up to 40 miles thick that is broken up into a series of blocks referred to as plates. The plates move about the earth's surface over a fluid zone of molten rock beneath the earth's crust.

Millions of years ago the Pacific Oceanic Plate was progressively moving towards the east and collided with the North American Continental Plate that was progressively moving towards the west. This collision caused the less rigid Pacific Oceanic Plate to bend down beneath the North American Continental Plate in a process known as subduction. The continued colliding motion of the two plates caused portions of the Pacific Oceanic crust and marine sediments deposited on that crust to be scraped off and pile up onto the North American Continental Plate along the west coast of the United States. The resulting chaotic jumble of bedrock units scraped off onto the North American Continental Plate are collectively known as the Franciscan assemblage, which occupies much of the Coast Range province, most of Marin County and the entire Town of Ross.

Subsequent development of a series of northwest-trending active fault zones, outside the Ross area has further contributed to the deformation of the Coast Ranges. Ross may be subject to strong seismic shaking associated with the major active fault zones in the San Francisco Bay region.

Geologic Units

The central portion of the Ross planning area occupies a broad flat valley whereas the east, west and south portions of the Town occupy steep, rolling hills. The central valley and hillside areas are covered with alluvium and colluvium soil deposits, respectively. The Franciscan assemblage beneath the soil units consist of sandstone, shale, conglomerate, basaltic volcanic rocks and Franciscan melange. These bedrock units have been mapped by the California Division of Mines and Geology (1976) and are described as follows:

(1) **Alluvium (Qa):** Unconsolidated deposits of clay, silt, sand and gravel underlying the bottom lands of the main stream valleys consisting of materials transported and deposited by the streams.

(2) **Colluvium (Qc):** Unconsolidated and unsorted soil material and weathered rock fragments accumulated on or at the base of slopes by natural, gravitational or slope wash processes. Derived by weathering and decomposition of bedrock materials underlying the slopes. Covers most slopes but mapped only where assumed to be more that 5 feet thick. May include some unrecognized landslide deposits.

(3) **Sandstone and Shale (Ks):** This unit consists of sandstone (ss) including arkose and arkosic/wacke varieties, shale (sh), sandstone and shale (ssh) and conglomerate (cg).

(4) **Basaltic Volcanic Rocks (kjg):** Predominantly greenstone which is altered basalt that was originally erupted in a submarine environment.

(5) **Franciscan Melange (fm):** A mixture of small to large masses of resistant rock types, principally of sandstone, greenstone, chert and serpentine, but including various exotic metamorphic rock types embedded in a matrix of sheared or pulverized rock material. Rock masses within the sheared melange matrix may include: sandstone and shale (ss or ssh); conglomerate (cg); chert (ch); greenstone (gs); metamorphic rocks (gl); and serpentinite (sp).

The locations of the various geologic units are shown in Figure 8 entitled Geologic Units. The dominant rock type is the sandstone and shale (Ks) unit which occupies the east hills and the mid to lower portions of the south and west hills. The sandstone and shale is overlain by Franciscan melange (fm) which is in-turn overlain by basaltic volcanic rocks (Kjg) which caps the south and west hills.

The resistance of these bedrock units to decomposition varies. The Franciscan melange is the least resistant; the sandstone and shale is moderately resistant; and the basaltic rocks are the most resistant. The Franciscan melange and basaltic volcanic rocks tend to have low permeability and to decompose into clayey soils that also have low permeability. The sandstone of the sandstone and shale unit tends to be moderately permeable, whereas the shale tends to have low permeability. The sandstone and shale unit decomposes to sandy soils that are moderately permeable. As a result, springs tend to form at the top of the Franciscan melange, or at the top of shale layers within the sandstone and shale unit.

Surface and Ground Water

Surface water from rain water runoff tends to be concentrated by seasonal drainage channels and swales. Swales are inclined depressions on hillsides that divert runoff to the seasonal drainage channels and tend to concentrate ground water that flows along the interface of saturated colluvium and the underlying bedrock. Ground water can also flow through fractures in basaltic volcanic rocks, sandstone and shale or can seep through the more permeable unfractured sandstone.

Mineral Resources

Mineral resources in the Town of Ross are limited to gravel and stone. Some abandoned stone quarries are mapped in the vicinity, but none are in operation and none are known to have significant commercial value.

GEOLOGIC AND SEISMIC HAZARDS

Background

The Ross planning area is affected by a variety of geologic and seismic hazards. The steep hillsides are subject to ground failure that includes landslides, expansive soil, soil creep and erosion. Potential seismic hazards that result from earthquakes include ground shaking, ground failure (including landslides, liquefaction and subsidence) and seiches, which are seismically induced water waves on an enclosed body of water such as Phoenix Lake.

Landslides

A landslide is defined here as the downslope movement of soil and rock material en masse under the influence of gravity. Several varieties of landslides are a major geologic hazard to any works of man constructed on, adjacent to, upslope of, or in the downslope path of landslides. The principle conditions that affect slope stability and the formation of landslides are decomposition of the earth materials underlying the slope, slope steepness, the concentration of surface and ground water, earthquakes and activities of man. Activities of man that may cause landslides include over-steeping cut-slopes, improper placement of fill on slopes, concentrating surface runoff or injecting water into the ground. The most common landslides affecting the Ross planning area include earthflows, debris flows and debris avalanches, all of which are restricted to soil and loose rock over bedrock. Some bedrock block landslides, which are masses of bedrock that have moved downslope, also affect the planning area.

Earthflows are landslides that occur in clayey soils and move slowly downslope at velocities of a few meters or less per day. Earthflows are often associated with soils derived from Franciscan melange.

Debris flows are associated with sandy soils and move more rapidly downslope that earthflows, usually during a single episode lasting a few minutes or hours. Debris flows usually occur in soils derived from the sandstone and shale bedrock unit.

Debris avalanche landslides are probably the most hazardous type of landslide affecting the Ross planning area. Although similar to debris flows, debris avalanches move more rapidly, with single episodes that last only seconds. They occur suddenly in over-saturated sandy or silty soils, such as those derived from the sandstone and shale unit. The soils tend to liquefy and flow rapidly downslope at speeds of up to 20 miles per hour. Because of their highly fluid nature, debris avalanches travel long distances and are controlled by drainage channels and canyons. Therefore, the mouths of canyons downslope of sandstone ridges are highly vulnerable to such avalanches. Studies by the U.S. Geological Survey in 1985 and the California

Division of Mines and Geology in 1984 indicate that the intensity of rainfall influences the occurrence of debris avalanches. When 10 to 15 inches of rainfall has accumulated in the soil and subsequent rainfall occurs at a rate of greater than one-half inch per hour for 4 hours, or greater than 4 inches in 10 hours, debris avalanches are likely to occur.

Expansive and Creeping Soils

Soils that have a high clay content in the planning area tend to be expansive. In other words, the clay tends to swell with increased moisture content and contract during dry spells. These volumetric changes with seasonal variations in moisture content can disrupt shallow foundations and pavements. On slopes, the annual swelling and shrinking of expansive soils causes the soil to migrate downslope at rates of a fraction of an inch per year. This downslope movement, known as soil creep, can disrupt foundations and utilities. Expansive and creeping soils should be identified prior to construction so that engineering measures can be implemented to minimize potential damage to structures.

Differential Settlement and Subsidence

Differential settlement is uneven settlement that occurs with time or during earthquake shaking in poorly consolidated granular soils adjacent to bedrock. Subsidence is settlement that may occur over a broad area if soils densify with time or as a result of ground water withdrawal. Settlement may occur in the colluvium or alluvium soils resulting in damage to structures, utilities and roadways. In the broad valley area in central Ross flooding may result if settlement occurs.

Erosion

Under present conditions, some stream bank erosion occurs along Corte Madera Creek and Ross Creek during periods of peak rainwater runoff. Rainwater runoff and discharging spring water has also caused gully erosion on portions of some hillsides in the planning area. Continued sloughing of the stream banks and enlargement of the hillside gullies is likely to occur if engineering practices to reduce erosion are not implemented.

Seismicity

The Ross planning area is located in the seismically active San Francisco Bay region of California. Due to its proximity to the San Andreas fault system, the planning area has been historically subjected to periodic strong damaging earthquakes. Such earthquakes will continue to affect the planning area in the future. The California Division of Mines and Geology considers faults active if they have displaced the ground surface during the last 10,000 years. No active faults are known to exist in the Ross planning area. The nearest active fault traces are the San Andreas fault located about 7 miles to the southwest and the Hayward fault located about 10 miles to the northeast. Due to the distance of these faults, ground surface displacement in the Ross area is unlikely. Other seismic effects include ground failure, seiche, dam inundation and ground shaking. These effects are discussed below.

Forms of ground failure that may be caused by earthquake shaking include landsliding, lateral spreading, lurching, differential settlement and liquefaction. As mentioned previously in this section, landslides and differential settlement may also occur unrelated to seismic activity. Lateral spreading includes lateral movements of a fractured rock mass or soil during earthquake shaking. Lurching involves the cracking and lateral movement of unstable slopes toward an unsupported free face during earthquake shaking. Liquefaction is the transformation of saturated, cohesionless, granular soils to a liquid state as a result of increased pore pressure and reduced friction between grains that result in a total loss of strength during earthquake shaking. Some alluvium deposits situated below the ground-water table within the central portion of Ross may be subject to liquefaction.

A seiche is an oscillating wave that forms on the surface of an enclosed body of water during earthquake shaking. If a seiche were to overtop the earth embankment dam for Phoenix Lake, the water would travel down Ross Creek and flood the valley.

In 1974, a seismic stability analysis of Phoenix Lake Dam was conducted for the Marin Municipal Water District. The purpose of this study was to assess the risk of seismically induced flooding associated with failure of Phoenix Lake Dam. The earth dam was constructed just prior to the 1906 San Francisco earthquake, which created a landslide on the inside portion of the dam embankment. The slope stability analysis conducted in

1974 concluded that the dam spillway could settle from 4 to 6 feet during an earthquake with a Richter magnitude of 8.5 generated along the San Andreas fault. The 1906 San Francisco earthquake had a Richter magnitude of 8.3.

In response to this assessment, the Marin Municipal Water District has widened the spillway by 5 to 6 feet and has lowered the spillway by 6 feet. Accordingly, these improvements to the dam have reduced the flood risk to 1 flood in 30,000 years. See Figure 10.

Seismically induced ground shaking may cause structural damage to foundations and the collapse of buildings. It also may cause non-structural building items such as cornices, light fixtures and shelves to fall. The first Uniform Building Code (UBC) regulations to address earthquake resistant design appeared in 1933. About 60% of the homes in Ross were built before the building code included provisions for seismic safety. Based on current knowledge of earthquake engineering, wood-frame older structures may perform well, whereas unreinforced brick buildings probably do not meet current seismic safety standards and would not withstand a major earthquake.

In general, the risk of damage associated with earthquake shaking is greater at sites underlain by alluvium, colluvium or landslide deposits (see Figure 8). However, these types of soils exist throughout the Bay Area and the degree of seismic risk in Ross is no greater than many other Bay Area communities.

SLOPE STABILITY ZONES

Slope stability maps of the Town of Ross area and other portions of Marin County were prepared by the California Division of Mines and Geology in 1976. These are shown in Figure 9 entitled Relative Slope Stability. The classifications are interpretive, and generally apply to large areas. Within each area conditions may range locally in detail through all stability categories. Hence, an area designated 1 may locally contain unmapped landslides, and an area designated 4 may locally contain relatively stable sites. The zones are defined below.

(1) **Zone 1:** The most stable category. This zone includes resistant rock that is either exposed or is covered only by shallow colluvium or soil. Also included in this zone are broad, relatively level areas along the tops of ridges or in valley bottoms that may be underlain by material that is quite weak (such as Franciscan melange matrix and alluvium) but occupies a relatively stable position.

(2) **Zone 2:** Includes narrow ridge and spur crests that are underlain by relatively competent bedrock, but are flanked by steep, potentially unstable slopes.

(3) **Zone 3:** Areas where the steepness of the slopes approaches the stability limits of the underlying geological materials. Some landslide deposits that appear to have relatively more stable positions than those classified within Zone 4 are shown here.

(4) **Zone 4:** The least stable category. This includes most landslide deposits in upslope areas, whether presently active or not, and slopes where there is substantial evidence of downslope creep of the surface materials. These areas should be considered naturally unstable, subject to potential failure even in the absence of man's activities and influences. Banks along deeply incised streams are also included in Zone 4.

Some debris avalanche landslides that occurred in Ross during the winters of 1982 and 1983 travelled thousands of feet crossing over all four zone areas, indicating that the effects of debris avalanche landslides are not reflected on the 1976 Slope Stability Map. Also, the slope stability map shows generalizations that are sometimes not correct. Therefore, the map is not suitable for site specific construction decisions.

GEOTECHNICAL REVIEW PROCEDURES

Existing Ordinances

The Town's existing geotechnical review procedures are set forth in the Ross Municipal Code Chapter 18.38 (Special Hazard District) and Chapter 18.39 (Special Hillside Lot Regulations). The Special Hazard District

designation can be attached to any district as an overlay zone and is intended to be applied in combination with general districts to require a special use permit recognizing the need for further review and conditions to adequately assess hazards related to land slope, erosion, soil stability, seismic action, wildfire, periodic inundation and other such features. The Special Hazard District also applies to all areas designated as slope stability "3" or "4", as described in the preceding section. The map used to implement this requirement is on file at Town Hall and is incorporated into the ordinance by reference. Any property so designated is then subject to the requirements of Chapter 18.39 (Special Hillside Lot Regulations).

The Special Hillside Lot Regulations requirements apply to those areas falling under the Special Hazard District (essentially all areas designated as slope stability "3" or "4") and lots that have an average natural slope in excess of 30%. The purpose of the regulations, as defined in the ordinance, are as follows:

(1) To protect the health, safety, comfort, convenience, general welfare and property of persons residing in the vicinity and neighborhood of steep hillside building sites, and those buildings thereon;

(2) To limit development in said areas to that which is consistent with the minimum disturbance of the natural features of the terrain, the topographic and geological conditions of the site, and the level of public services and road access that can be reasonably provided to and within the parcel;

(3) To protect and preserve open space land as a limited and valuable resource;

(4) To permit the reasonable use of open space land, while at the same time preserving and protecting its inherent open space characteristics to assure its continued availability for the following: (a) as agricultural land, conservation or natural resource land, (b) for the containment of urban sprawl and the structuring of urban development, and (c) for the retention of land in its natural or near natural state to protect life and property in the community from the hazards of fire, flood and seismic activity;

(5) To coordinate with and carry out federal, state, regional, county and city open space plans.

The regulations in Chapter 18.39 also set out very specific requirements for submission of plans and other information, content of special studies, notice and hearing, standards for density and design, etc. The regulations can be applied to a subdivision or a single building permit. The ordinance, as it relates to geotechnical review, requires specific geotechnical issues to be addressed in reports from a certified engineering geologist and a geotechnical (soil) engineer. The Town may also require an independent report at the applicant's expense.

Report Documentation and Review

Actual implementation of geotechnical review is a critical part of assessing geologic safety in the community. This section discusses the content of three different geotechnical reports and the geotechnical review needed at different stages of project development. Also included are possible changes to existing procedures that should be considered by the Town in a more specific evaluation of the appropriate ordinances and procedures. They are based on suggestions by the Town's geotechnical consultant, Donald Herzog and Associates.

Preliminary Geologic Feasibility Report

The purpose of this report is to identify obvious geologic hazards, geotechnical problems and conditions that should be addressed during a more detailed investigation, and to assess the suitability of the site for the project.

The preliminary geologic feasibility report is an application requirement for lots on hillside areas. According to Section 18.39.020 of the Town ordinances, " 'hillside areas' are defined as any lot, or any area in which construction is proposed, that has an average natural slope in excess of thirty percent". The scope of this report presented in Section 18.39.030 (a) (6) is as follows:

(6) A report from a certified engineering geologist discussing, in detail, the following: The suitability and

geological feasibility of placing a building on the sites, or site, the effect of any construction, including, but not limited to buildings, tennis courts, swimming pools, roads, water facilities, storm drainage facilities, utilities and other accessory structures on the site, or sites. The report shall address, but not be limited to the following:

(A) Slope stability on the site and on areas that may be affected by the site or which themselves affect the site,

(B) Identification of all drainage areas and assessment of all possible hazards associated with the drainage areas. This shall include, but not be limited to the potential for damage from source of or path of debris flow, avalanches and mudslides,

(C) Potentiality of surface erosion and its effect on existing ground cover and trees,

(D) Potentiality of damage due to removal of existing ground cover and trees, and the removal, storage and replacement of existing soil and/or bedrock,

(E) Evaluation of surface and subsurface water conditions and its effect on the stability on the site and surrounding areas,

(F) Evaluation of the site in relation to all mapped earthquake faults and possible stresses to the proposed construction from earthquake forces.

The geotechnical consultant suggests requiring the Preliminary Geologic Feasibility Report for all projects. The purpose of this requirement would be to address concerns about the slope stability map classifications. The classifications are interpretive and generally not appropriate for site specific use since within each area conditions may range locally in detail through all stability categories. Thus, a procedure could be established to address this issue. Once the preliminary report is prepared and accepted by the Town, the Town could require a subsequent, more thorough geotechnical investigation similar to the requirements under the Special Hillside Lot Regulations.

Geotechnical Investigation Report

The purpose of this report is to define the subsurface conditions and provide geotechnical conclusions and recommendations for completing the project. If desired, the preliminary report can be included as part of the scope of work for the geotechnical investigation report rather than preparing two separate reports, if in the judgement of a certified engineering geologist there are no geologic hazards that would preclude development of the project.

The geotechnical consultant recommends that geotechnical investigation reports include the following:

1. In "hillside areas" investigation reports should include evaluation by a certified engineering geologist of the geologic conditions affecting the site. The evaluation should be based on the subsurface data obtained during the investigation.

2. Geologic conditions previously unrecognized and unanticipated by preliminary geologic feasibility reports should be identified by a certified engineering geologist and addressed in investigation reports by appropriate measures.

3. Investigation reports for sites on "hillside areas" should be signed by both a certified engineering geologist and a geotechnical engineer. Investigation reports for sites not on "hillside areas" may require only the signature of a geotechnical engineer.

Section 18.39.030 of the Ross Municipal Code (Special Hillside Lot Regulations), which defines the scope of the geotechnical investigation report as follows:

(3) A report, from a licensed engineer expertly qualified in soil matters, addressing itself to the following:

(A) Individual building site and overall site soil stability, including recommendations for grading and prevention of soil erosion;

(B) Drainage;

(C) Building foundations and other earth supported structures;

(D) Site borings and other explorations deemed necessary by the soils engineer to insure completeness of his report.

Review of Reports

Section 18.39.030 (C) of the Ross Municipal Code stipulates that geotechnical reports submitted to the Town Council with plans and other data must be reviewed. The scope of review is as follows:

(C) The above plans, data and reports shall be reviewed and analyzed by the Town Building Official to determine compliance with the requirements of this chapter and the general plan, and to determine whether independent engineering reports are necessary or would be helpful to the town to assist the town in evaluating the application.

If the above review indicates that an independent study by a Geotechnical Engineer or Certified Engineering Geologist is required or would be helpful to the Town to evaluate the application, the application and all plans shall be submitted to an independent geological expert or Certified Engineering Geologist designated by the Town at the applicant's expense, prior to the hearing required by Section I8.39.040, and the following items shall apply to the review:

(1) The independent Geotechnical Engineer or Certified Engineering Geologist shall, based on his review, advise the council if a significant risk to adjoining property of structures is, or will be, created by the proposed development, including the construction of any roads or appurtenant structures, or by the condition of all of the property after development has occurred, or whether a significant risk of future damage to any structures proposed to be constructed on the property is apparent by reason of the conditions of adjoining property, or whether any significant degree of repair necessary to mitigate the soils conditions on the site might create other environmental concerns (such as vegetation removal, massive grading or the like).

(2) All stable areas on the site, such as slides, severe creep areas, and debris flows, both in the immediate area of the proposed development and elsewhere on the site, shall be repaired to the satisfaction of the Town Engineer, including any roadways transversing non-developed areas.

(3) Prior to any approval of a final subdivision map, all slides to be repaired shall be bonded to guarantee the repair during the normal construction of subdivision improvements. In the case of parcel maps, bonding shall be provided prior to the recordation of the parcel map.

(4) All slide repair work shall be accomplished to the satisfaction of the Town Engineer and shall be certified in writing by a Registered Civil Engineer or Engineering Geologist prior to the issuance of a building permit.

Construction Observation Report

Currently, there are no special requirements under the Town's existing geotechnical review procedures for a construction observation report. The geotechnical consultant recommends the addition of this report as a new requirement when the recommendations of a Geotechnical Investigation Report are implemented. The Construction Observation Report would document geotechnical field observations and testing during construction and it is recommended that it be prepared by a certified engineering geologist or soils engineer. The purpose of the report is to provide a measure of safety to the community by helping to ensure that new construction work is performed in accordance with the intent of recommendations and requirements provided in the Geotechnical Investigation Report. The geotechnical consultant recommends that the report include a description of the following:

(1) grading, foundation excavation, subsurface drainage and geotechnical mitigation measures;

(2) the items observed and tested;

(3) unanticipated conditions encountered during grading and construction;

(4) field changes implemented that differ from the approved grading and construction plans; and

(5) a statement regarding the conformance or non-conformance of the construction to the geotechnical recommendations.

Summary of How Recommendations by the Geotechnical Consultant May Relate to General Development Procedures

Specific amendments to the Town's Municipal Code would have to be made to implement the geologic consultant's recommendations. The following is a list of development procedures that are generally followed in sequence from conception of a project to occupancy. This list is intended to illustrate where in the process different actions may occur. These procedures will not necessarily apply to every project, and some projects may require additional procedures (those noted with an asterisk - * - pertain specifically to geotechnical investigation requirements.

(1) Preparation of topographic map.

(2) Preparation of a site layout plan.

(3) Preparation of a preliminary site feasibility report.*

(4) Submit application to the Town for the project.

(5) Obtain preliminary approval for development from Town.

(6) Preparation of geotechnical investigation report.*

(7) Preparation of grading plans by Civil Engineer.

(8) Obtain approval of the geotechnical investigation report from the Town Engineer based upon review by independent certified engineering geologist/soils engineer.*

(9) Preparation of foundation structure design plans by civil/structural engineers.

(10) Review and approval of the construction plans by the project soils engineer, and, if slope stability mitigation is proposed, by the project certified engineering geologist.*

(11) Review and approval of plans by the Town Engineer and the Town Building Official.

(12) Issuance of building permit.

(13) Begin construction.

(14) Construction observation of grading, drainage measures and foundation installation by certified engineering geologist/soils engineer. Review of mitigation requirements/enforcement.*

(15) Preparation of construction observation report by certified engineering geologist/soils engineer following construction.*

(16) Obtain occupancy permit from Town Building Official.

FLOOD HAZARDS

Flooding has been an historical problem within Ross. More recent flood episodes have occurred in 1955, 1958, 1967, 1969, 1970, 1982 and 1983. The January, 1982 storm produced the largest recorded flood-flow at the Ross stream gaging station. The Town is currently involved with the design of a flood control

project in conjunction with the U.S. Army Corps of Engineers to reduce the flood area adjacent to Corte Madera Creek.

The U.S. Army Corps of Engineers constructs flood control projects on major regional creeks in urban areas. The current project is Unit 4 in a four-part program for flood control improvements to Corte Madera Creek. Units 1, 2 and 3 were completed in 1971. Army Corps of Engineers' projects are usually designed to prevent flooding from the 1% risk flood (the 100-year flood). This is considered by the Corps to be a suitable degree of flood protection in urban areas. The current 100-year flood zone generally extends from Sir Francis Drake Boulevard, on the east, past Shady Lane, Allen Avenue and Brookwood Lane on the west. The proposed improvements would reduce the 100-year flood area significantly.

The National Flood Insurance Act of 1968 and the Flood Disaster Prevention Act of 1973 established a national flood insurance program which is administered by the Federal Emergency Management Agency (FEMA). The national flood insurance program provides insurance coverage to property owners within flood hazard areas. In order to qualify for this program, communities must file application and adopt minimum land use and flood control measures for new construction. FEMA prepares flood insurance rate maps commonly referred to as FIRM maps which identify flood zones and areas which are susceptible to 100-and 500-year floods. These areas are shown in Figure 10.

The storm drainage system in Ross has evolved over a long period of time without the benefit of a master plan for area development. In addition, natural drainageways have been altered by development and rely on annual maintenance by property owners to be effective. Such maintenance includes removal of sediment from culverts. Typically, there needs to be ongoing maintenance prior to seasonal rains.

FIRE HAZARDS

Fires may occur in structures used for commerce, housing and public gatherings, and may also occur as wildfires in open areas. Fire prevention techniques differ for structural fires and wildfires, but successful fire control and extinguishment in either case depends on getting sufficient fire fighters and equipment on the scene promptly. Preventing and extinguishing structural fires is essential to protecting life, structures and resources. The Town of Ross has adopted a Fire Code to reduce the risk of damage from fire.

Ross has a semi-arid Mediterranean-type climate of mild, wet winters and hot, dry summers. Little or no rain falls from April through November. Drying winds in the summer and fall months reduce fuel moisture and humidity to minimum levels, thereby creating dangerous fire weather conditions. The natural grassland, brush and woodland vegetation in Ross is extremely flammable during the late summer and fall, which makes wildfires a serious hazard in open space areas and on large-lot homesites with extensive areas of unirrigated vegetation. Under these dry climatic conditions the vegetation is ignited easily and burns with great intensity.

In addition to the dry season, the steep slopes and rugged terrain which characterizes Ross has a great effect on wildland fire behavior and the suppression capability of firefighters and their equipment. The topography of Ross increases from approximately 10 feet above sea level along Corte Madera Creek to above 500 feet on along San Rafael Hill ridge, approximately one-half mile away, and over 1,140 feet at the top of Bald Hill, approximately one mile away. This rough topography greatly restricts road construction and accessibility for firefighting apparatus. Steeper slopes are also a major contributing factor because they have a fire-spreading effect similar to higher velocity winds.

Wildfire hazard is also related to vegetation type, exposure to sun, wind speed and direction and accessibility of human activities. Fuel loading, which reflects the differing amounts of fuel provided by various vegetation types, is important in determining the degree of hazard. The tree canopy can also help to spread a fire. Fire hazard severity can be further refined by including exposure to sun, since south and west facing slopes are generally dryer than north and east facing slopes, and thus have a somewhat longer fire hazard season. Wind speed is not predictable, but strong winds are generally more prevalent on prominent ridges so that ridge tops are particularly susceptible to the spread of fire. Finally, increased human use and access to open areas increases the potential for fires. The growth in combustable, non-ornamental grasses and bushes and fire road maintenance and access are several specific problems identified by Public Safety Department personnel.

There are several areas of Ross which currently do not meet the Town's water pressure standard for fighting fires established by the Public Safety Department. This standard is 1,000 gallons per minute (gpm). Water pressure levels below this standard are primarily due to inadequate pipeline size and water tank storage and elevation levels. Water flow from hydrants and water storage tanks are shown in Figure 11.

Generally, all areas of Ross are within an adequate response time for firefighting equipment. The only area not easily served are lots located on Ross Hill served through Kent Woodlands. This area would be served by the Kentfield Fire Department. Setbacks provided in the Zoning Ordinance offer ample clearance around structures. The Public Safety Department has an annual grass/brush hazard clearance program. In addition, Public Safety personnel provide information for the public and offer classroom education on safety for grades 1-3 at Ross Elementary School.

HAZARDOUS MATERIALS

Hazardous wastes are any chemical compound creating a threat to health, ranging from automobile oil to known cancer causing chemicals. In the 1970's and 1980's, hazards created by toxic waste spills and by contamination from former dump sites have become a subject of increasing concern. Federal and state legislation have focused on cleanup of the most hazardous dump sites, landfill monitoring programs to identify and contain potential hazards, programs to identify businesses using hazardous materials and wastewater pre-treatment requirements for industries discharging hazardous waste into municipal systems.

In the last few years, several significant efforts have been made to improve Marin County's capability to deal with hazardous waste. The first actions were related to hazardous materials spills. Included was the creation of the Hazardous Materials Committee within the Marin County Disaster Council. The committee arranged for the establishment of the Hazardous Materials Response Team and prepared the Hazardous Materials Incidence Response Plan, which was made a part of the Marin County disaster plan in 1984. A Joint Powers Agreement (JPA) involving all Marin County cities, the County, California Highway Patrol and County Fire Districts has designated a unit of the San Rafael Fire Department to contain hazardous materials spills and a unit of the County to identify the type of spill and enforce applicable health laws and regulations regarding such spills.

The Marin Conservation League (MCL) has also been active in studying the issues related to hazardous materials problems and public education. In 1984, MCL prepared a report entitled "Hazardous Materials and Toxic Substances in Marin County" and sponsored several public forums on the subject. MCL's recommended solutions to hazardous waste issues include: public education about buying, using and disposing of toxic materials and about the use of safe, effective alternatives; business, employer and employee education; educating agencies about Integrated Pest Management; providing regular collection programs for safe disposal of household, business and agency hazardous waste; and encouraging public policies which minimize the use of toxic materials.

In 1985, the Board of Supervisors created a new Hazardous Materials Committee, with a membership of local officials and representatives of industry, environmental groups and the public, to assess hazardous materials problems and develop a comprehensive policy regarding the use, storage, transport and disposal of hazardous materials of all types. Marin County is currently preparing a Hazardous Waste Management Plan to be included as an element of the County's Solid Waste Management Plan.

Sites where materials such as paint, rubber products, oil, tar, solvents, pesticides, etc. were used have the potential for containing hazardous soils on the site or nearby. Existing or former "light industrial" uses located in the community, such as gas stations, machine shops, nurseries, laboratories, laundries, maintenance yards, fuel tanks or chemical storage sites, should be evaluated for potentially hazardous soils prior to development approvals.

Hazardous materials, such as paints, solvents and cleaning compounds, are also typically present in small quantities in people's homes. Proper disposal of these materials is a serious countywide and local issue. The County's Hazardous Waste Management Plan will address issues such as the management of small volumes of hazardous waste produced by households and businesses.

Other issues include hazardous materials transported through the Town of Ross and the types of pesticides and chemicals used by the Town. For example, gas trucks and water treatment plant trucks regularly travel

through the Town on Sir Francis Drake Boulevard. Any hazardous materials spills would be handled through existing containment procedures established through the JPA. In regard to potential hazards associated with chemicals used by the Town, the Town could maintain and publicize an inventory of hazardous materials and substances used. Part of this publicity effort could also inform residents about ways to dispose of household hazardous waste.

EMERGENCY PREPAREDNESS PLANNING

Emergency (disaster) preparedness planning consists of three major components: government actions, private organization emergency response actions, and individual or small group actions. Emergency preparedness planning recognizes that in the first 72-hours after a major disaster, people must be self sufficient. Governments cannot provide all of the services that may be needed. Therefore, disaster preparedness involves planning efforts by local government, private organizations and local groups to identify resources provide public awareness and formulate plans about what to do in an emergency situation.

Government disaster preparedness planning efforts are handled primarily by the Public Safety Department and the Public Works/Planning Department, as well as the County Office of Emergency Services. The County and each city are required to prepare disaster plans in accordance with State regulations (Govt. Code Chapter 7, Division 1, Title 2). The Disaster Plan is a plan primarily for government response to disasters. It assigns duties for emergency response, designates an emergency operating center and emergency shelters, and defines the emergency broadcast system.

The Town of Ross has begun preparation of an updated Disaster Preparedness Plan in conformance with guidelines established by the state and county. The steps in completing this plan include: (1) designation of a disaster coordinator by Town officials to coordinate all efforts concerning the Disaster Preparedness Plan; (2) Town refinement of the Draft Disaster Plan; (3) coordination with the County Office of Emergency Services, local schools (Ross Elementary School, The Branson School, Cedars and Ross Montessori School), churches (St. John's and St. Anselm's) and the Red Cross; (4) complete the plan; and (5) provide community education about the plan and neighborhood disaster response.

In addition to disaster planning, the County Office of Emergency Services trains community groups about disaster preparedness. The American Red Cross also provides disaster training to private organizations countywide through a program funded by The San Francisco Foundation. The program was proposed in 1982 after major county storms identified a need for additional disaster preparedness, especially at the neighborhood level. It set up four task forces to develop training programs for schools, neighborhoods, businesses and religious organizations. Each group developed a draft training program. This year, the Red Cross is pilot testing these emergency preparedness plans. After testing, the plans will be finalized, and Red Cross staff are expected to go out into the community and train school, neighborhood, business and religious groups in disaster planning.

Town Public Safety staff have identified St. John's and St. Anselm's churches, The Branson School and Ross Elementary School and Marin Art and Garden Center as emergency housing shelters to be used in case of disaster. Emergency medical and command post sites have also been designated by Public Safety staff. These are shown in Figure 12 entitled Possible Emergency Evacuation Routes. Emergency connectors and evacuation routes to facilitate movement in and out of the area and police and fire emergency response are shown on the same map. The primary evacuation route in the Town is Sir Francis Drake Boulevard, although in some emergencies, such as flooding, Sir Francis Drake Boulevard can be closed. Many emergencies are limited in scale and in such instances safety personnel may designate specific town streets as evacuation routes, depending on where the incident occurs. Other evacuation routes include portions of Lagunitas Road, Willow Avenue, Laurel Grove Avenue, Makin Grade, Glenwood Avenue, Fernhill Avenue and Bolinas Avenue.

Joint Powers Agreements (JPA's) with other communities provide for adequate emergency personnel response in emergencies. Nevertheless, emergency preparedness officials stress the need for individuals and small groups to be prepared. With the many organizations working to provide small group and individual training, general emergency preparedness throughout the County should be significantly improved over the next few years. The need to publicize and coordinate emergency plans will be part of this effort.

NOISE BACKGROUND

NOISE BACKGROUND

INTRODUCTION

Noise is generally defined as unwanted sound. Whether a sound is unwanted depends on when and where it occurs, what the listener is doing when it occurs, characteristics of the sound (loudness, pitch and duration, speech or music content, irregularity) and how intrusive it is above background sound levels.

Noise is also subjective; one person's music is another person's noise. The degree of noise impact can also depend on people's awareness and attitudes. For example, people are more likely to object to noise they believe is unnecessary and less likely to object to sounds associated with safety concerns. Attitudes that can decrease noise impacts are whether one's employment is derived from it, or whether the noise is viewed as a typical condition and there is little that can be done about it. Contents of this section include the following:

- Introduction
- State Guidelines and Requirements for Noise Elements
- Fundamental Concepts of Noise and Sound
- Effects of Noise on People
- Basis for Noise Standards
- Existing Noise Problems in Ross
- Noise Exposure Areas in Ross
- Existing Town Noise Controls

STATE GUIDELINES AND REQUIREMENTS FOR NOISE ELEMENTS

A Noise Element has been required as part of local General Plans since 1971. The State Legislature adopted the California Noise Control Act of 1973, which defined the following State noise findings and policy:

(1) Excessive noise is a serious hazard to the public health and welfare.

(2) Exposure to certain levels of noise can result in physiological, psychological and economic damage.

(3) There is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas.

(4) Government has not taken the steps necessary to provide for the control, abatement, and prevention of unwanted and hazardous noise.

(5) It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

To implement this policy, the State Office of Noise Control (ONC) has established guidelines for the preparation of noise elements in local general plans. The following citation from the State Government Code summarizes the intent of the Noise Element (Section 65302 (f)):

> A noise element which shall identify and appraise noise problems in the community. The noise element shall recognize the guidelines established by the Office of Noise Control in the State Department of Health Services and shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels for all of the following sources:
>
> (1) Highway and freeways.

(2) Primary arterials and major local streets.

(3) Passenger and freight on-line railroad operations and ground rapid transit systems.

(4) Commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation.

(5) Local industrial plants, including, but not limited to, railroad classification yards.

(6) Other ground stationary noise sources identified by local agencies as contributing to the community noise environment.

Noise contours shall be shown for all of these sources and stated in terms of community noise equivalent level (CNEL) or day-night average level (Ldn). The noise contours shall be prepared on the basis of noise monitoring or following generally accepted noise modeling techniques for the various sources identified in paragraphs (1) to (6), inclusive.

The noise contours shall be used as a guide for establishing a pattern of land uses in the land use element that minimizes the exposure of community residents to excessive noise.

The noise element shall include implementation measures and possible solutions that address existing and foreseeable noise problems, if any. The adopted noise element shall serve as a guideline for compliance with the state's noise insulation standards.

FUNDAMENTAL CONCEPTS OF NOISE AND SOUND

As stated above, noise is unwanted sound. Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound moves in waves from its source, like ripples in a pool of water. It can be reflected, scattered or absorbed as it moves through space. Sound levels are usually measured and expressed in decibels (dB), with 0 dB corresponding roughly to the threshold of hearing. Upper limits are approximately 140-160 dBA. The ear begins to feel pain at about 120 dBA.

Most of the sounds which we hear in the environment do not consist of a single frequency, but rather a broad band of frequencies, with each frequency differing in sound level. The intensities of each frequency add together to generate a sound. The method commonly used to quantify environmental sounds consists of evaluating all of the frequencies of a sound in accordance with a weighting that reflects the facts that human hearing is less sensitive at low frequencies and extreme high frequencies than in the frequency mid-range. This is called "A" weighting, and the decibel level so measured is called the A-weighted sound level (dBA). In practice, the level of a sound source is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve.

Although the A-weighted noise level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from distant sources which create a relatively steady background noise in which no particular source is identifiable. To describe the time-varying character of environmental noise, the statistical noise descriptors L_{10}, L_{50} and L_{90} are commonly used. They are the A-weighted noise levels equaled or exceeded during 10%, 50% and 90% of a stated time period. A single number descriptor called the L_{eq} is now also widely used. The L_{eq} is the average A-weighted noise level during a stated period of time.

Decibels are calculated on a logarithmic basis similar to the Richter Scale for earthquakes. With regard to increases in A-weighted noise level, knowledge of the following relationships will be helpful in understanding noise effects and control.

(1) Except for carefully controlled laboratory experiments, a change of 1 dB cannot be perceived.

(2) Outside of the laboratory, a 3 dB change is considered a just-perceivable difference. A 3 dBA change is realized by a doubling or halving of the traffic volume or by about a 7 mile per hour increase or decrease in speed.

(3) A change in level of at least 5 dB is required before any noticeable change in community response would be expected.

(4) At any level, a 10 decibel (10 dBA) increase in an existing sound level is subjectively heard as approximately doubling in loudness, and would almost certainly cause an adverse change in community response. For example, 65 dBA is perceived to be about twice as loud as 55 dBA.

(5) For each doubling of distance from a point noise source, the sound level will decrease about 6 dBA. In other words, if a person is 100 feet from a machine, and moves to 200 feet from that sound source, sound levels will drop about 6 dBA. For each doubling of distance from a line source, like a roadway, noise levels are reduced by 3-5 decibels, depending on the ground cover between the source and the receiver.

(6) Two identical sounds combined increase sound by 3 dBA. As an example, two 70 dBA cars passing by at the same time will be 73 decibels. If one source is more than 10 dBA above another, the lesser noise adds practically nothing to the overall sound level.

(7) As a general rule, if a noise source can be seen, it can be heard. If the source is shielded from view by a substantial barrier, noise will be reduced. Landscaping does not reduce noise significantly: as wind passes through landscaping, so does noise. However, landscaping may produce a feeling of isolation from the noise source.

In determining the daily level of environmental noise, it is important to account for the difference in response of people to daytime and nighttime noises. During the nighttime, exterior background noises are generally lower than the daytime levels. However, most household noise also decreases at night and exterior noise becomes more noticeable. Further, most people sleep at night and are very sensitive to noise intrusion.

To account for human sensitivity to nighttime noise levels, a descriptor, L_{dn} (day-night average sound level), was developed. The L_{dn} divides the 24-hour day into the daytime of 7:00 am to 10:00 pm and the nighttime of 10:00 pm to 7:00 am. The nighttime noise level is weighted 10 dB higher than the daytime noise level. The Community Noise Equivalent Level (CNEL) is another 24-hour average which includes both an evening and nighttime weighting.

EFFECTS OF NOISE ON PEOPLE

The effects of noise on people can be listed in the following three general categories.

(1) Subjective effects of annoyance, nuisance, dissatisfaction

(2) Interference with activities such as speech, sleep, learning

(3) Physiological effects such as startling, hearing loss

The levels associated with environmental noise, in almost every case, produce effects only in the first two categories. Workers in industrial plants can experience noise in the last category. Unfortunately, there is as yet no completely satisfactory way to measure the subjective effects of noise, or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance, and habituation to noise of differing individual past experiences with noise.

Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of the existing environment to which one has adapted: the so-called "ambient". In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by the hearers.

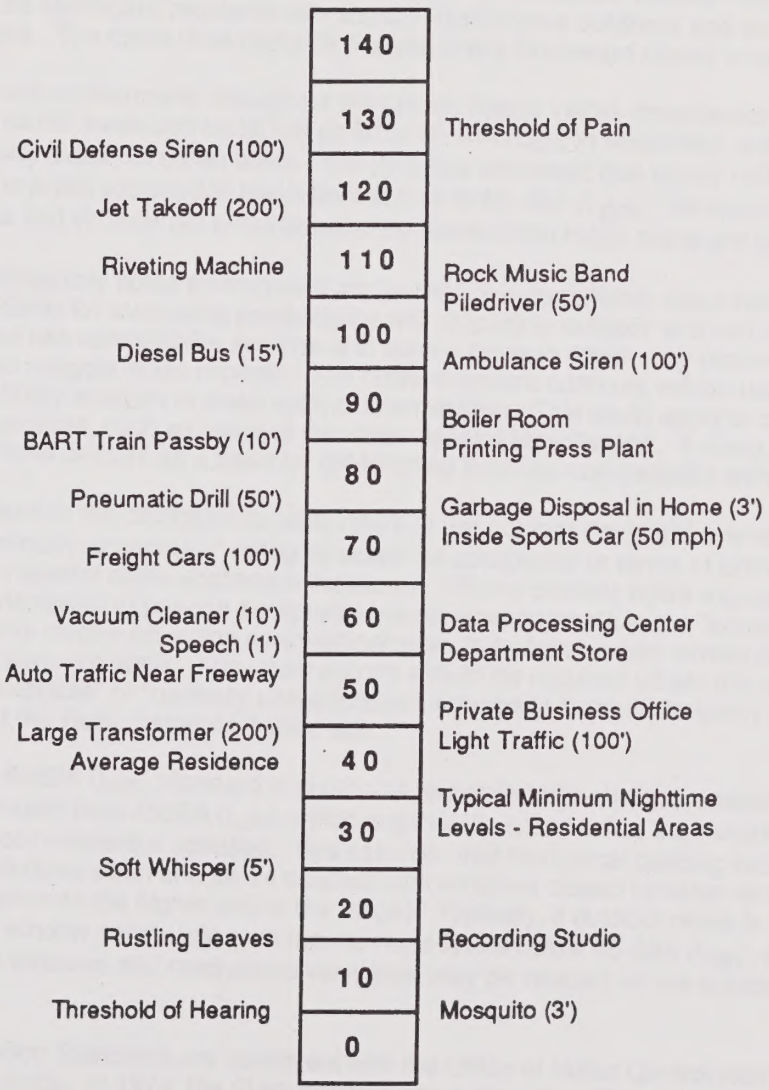
According to the Environmental Protection Agency (EPA), damage to the human ear can occur at about 70 dBA. Permanent hearing damage can occur at 80-85 dBA, if sustained over 8 hours a day over the course of a worker's career. Higher levels cause hearing damage in shorter periods of time. Noise above 40-45 dBA can disturb a sleeping person: whether a person awakens will depend on noise levels, type of noise, stage of sleep, age and so on. Older people and persons who are ill are particularly susceptible to sleep

interference caused by noise. Speech interference begins occurring at 45-50 dBA, and becomes severe at 60 dBA or above. Sounds above 70dBA can cause physical stress reactions, such as tightening of the stomach muscles, increased heartbeat and adrenalin flow. Over a period of time these reactions can lead to ulcers, intestinal malfunctions, and heart disease.

Studies have also found that work performance can be affected at noise levels of 65 dBA and above. Some effects of noise on work performance are as follows: Noise is more likely to reduce the accuracy of work than to reduce quantity. Complex tasks are more likely to be affected by noise. Higher frequency, intermittent and impulsive sounds are more disruptive than lower or more steady state sounds. Noise also causes higher accident rates. Other adverse economic costs of noise are housing turnover; soundproofing for noise-producing equipment and noise-impacted buildings; and the costs of constructing noise barriers adjacent to noise sources. Below are typical sound levels.

Typical Sound Levels Measured In the Environment and Industry

A-Weighted Sound Pressure Level in Decibels



(100') = Distance in Feet Between Source and Listener
Source: Charles Salter Associates

BASIS FOR NOISE STANDARDS

It is difficult to specify noise levels which are generally acceptable to everyone. What is annoying to one person may be unnoticed by another. Standards may be based on documented complaint activity in response to documented noise levels, or based on studies on the ability of people to sleep, talk, or work under various noise conditions. All such studies, however, recognize that individual responses vary considerably. Standards usually address the needs of most of the general population.

With this caution in mind, noise standards for planning purposes need to examine outdoor and indoor noise levels acceptable for different uses. The standards must relate to existing conditions in the Town so that they are realistically enforceable and consistent with other General Plan objectives. The State Government Code requires that sound level information in noise elements of general plans be expressed in either L_{dn} or CNEL, as described earlier.

The L_{dn} noise descriptor was developed by the United States Environmental Protection Agency (EPA) in the early 1970's to assess the compatibility of residential development with various levels of environmental. The EPA, under the direction of the United States Congress, determined that an Ldn of 55 dB is the level requisite to protect the public health and welfare in residential areas where outdoor use is important. Their recommendation included a 5 decibel factor of safety. Their studies indicate that at an L_{dn} of 60 decibels, there begin to be significant problems with speech interference outdoors and activity and sleep disturbance problems indoors. The noise level along Sir Francis Drake Boulevard clearly exceeds acceptable levels.

The outdoor noise environment throughout the United States varies considerably. Outdoor Day-Night Average (L_{dn}) sound levels can be as low as 30 to 40 dBA (L_{dn}) in wilderness areas and as high as 85-90 dBA (L_{dn}) in noisy industrial urban areas. The EPA has estimated that nearly half of the nation's metropolitan population live in areas exposed to levels between 55 to 60 dBA (L_{dn}). Generally, in Ross, L_{dn} levels in residential areas and in backyard areas shielded by homes from major roads are below 55 dBA (L_{dn}).

To provide a satisfactory noise environment and to minimize complaints about community noise, the Town must have standards for evaluating compatibility with respect to outdoor and certain indoor noise levels. The purpose of a land use compatibility analysis is to screen projects which may require specific design considerations to mitigate noise impacts. The noise exposure contours will be used in conjunction with the land use compatibility analysis to make such a determination. This could apply to both new and major redevelopment projects, such as reuse of the Ross General Hospital site. A noise compatibility table is included in the noise policies as a basis for determining land use compatibility with the noise environment.

The noise exposure in the compatibility table refers to the outdoor day/night average noise level (L_{dn}). A project in the "normally acceptable" category would be acceptable in terms of both its indoor/outdoor noise exposure without special noise abatement measures. Where outdoor noise exposure is less important, projects can be designed to provide acceptable interior environments in the "conditionally acceptable" category. This may involve providing air conditioning so that windows can remain closed, or, at higher levels, sound rated windows and walls. Acoustical reports should be required where the noise exposure is "conditionally acceptable" or "normally unacceptable", especially for multiple family projects, such as potential redevelopment of the Ross General Hospital site.

The intent of the 60dBA (L_{dn}) standard is to provide, either through design, location or insulation, for interior noise levels no greater than 45dBA (L_{dn}), which is generally accepted as the maximum acceptable noise level for most indoor residential activities. This assumes that the typical building reduces outdoor noise by l0-l5 decibels with windows open and 20-24 decibels with windows closed (smaller windows and better construction can provide the higher end of the range). Typically, if outdoor noise is less than 60 dBA (L_{dn}), average wall and window construction will reduce noise levels below 45 dBA (L_{dn}), even with partially open windows. Closed windows and mechanical ventilation may be needed where outdoor noise levels are above 60 dBA (L_{dn}).

State Noise Insulation Standards are consistent with the Office of Noise Control residential Land Use Compatibility standards. In 1974, the State adopted Noise Insulation Standards (Title 25, State Administrative Code) for new hotels, motels, and dwellings other than single family detached dwellings. Those standards established 45 dBA (L_{dn}) as the maximum interior sound level (attributable to exterior sources) in any room. Where exterior sound levels are 60 dBA (L_{dn}) or above, acoustical analyses for

projects are required to ensure that the structure has been designed to limit outside noise to the allowable interior levels. The State Noise Insulation Standards also include standards to be met for sound transmission between units. One of the purposes of requiring noise elements in local general plans is to help implement these interior insulation regulations by identifying where special remedial measures are required.

There is general concurrence that a day-night average of 45 decibels (45 dBA [L_{dn}]) is the highest acceptable residential interior noise level. However, this standard is not very protective against sleep disturbance. Establishing a local standard of 40 dBA (L_{dn}) for new bedrooms in any multiple family projects would protect against sleep interference and would encourage building designs which locate sensitive sleeping areas on the quieter side of the building. Such a standard would also be appropriate for sleeping rooms in hospitals and nursing homes, where people are particularly sensitive to sleep interference from noise.

The basis for establishing indoor noise levels for other uses would be to minimize disturbance, maintain adequate speech communication and protect against hearing loss. Appropriate interior noise levels in commercial buildings is dependent on the use of the space. For example, noise levels in private offices should generally be quieter than for word processing rooms. Therefore, interior noise level criterion should be the responsibility of the commercial occupant or project sponsor, provided they do not exceed Occupational Health and Safety Administration (OSHA) limits.

EXISTING NOISE PROBLEMS IN ROSS

The major source of noise in Ross is traffic on Sir Francis Drake Boulevard. However, the major issue with respect to noise, as commented on at the General Plan Public Workshop in December, 1986, concerns the use of power equipment for blowing leaves, mowing lawns and constructing buildings. About half of those mentioning this problem called for an all-out ban on power blowers, while others said their use should be restricted by Town ordinance. Other sources of noise mentioned at the workshop were traffic noise, including especially noisy motorcycles, events at the Marin Art and Garden Center and barking dogs.

NOISE EXPOSURE AREAS IN ROSS

Government Code §65302(f) requires cities to prepare noise contours (lines of equal noise exposure) around major noise sources to identify high noise exposure areas. "Noise exposure areas" are defined as those areas where noise levels exceed 60 dBA (L_{dn}). The noise assessment for the General Plan was undertaken by Illingworth & Rodkin, Acoustical Engineers. To assess the existing noise level along Sir Francis Drake Boulevard, a 24-hour noise measurement was made at a typical building setback (40 feet from the centerline of the near lane) on the south side of Sir Francis Drake Boulevard in the vicinity of Berry Lane.

Using existing and future traffic projections developed for the General Plan by Wilbur Smith & Associates, noise exposure along the other streets in Ross were calculated. While noise levels along Sir Francis Drake may be unacceptably high, noise levels along the remaining streets in Ross are significantly lower. The traffic data indicate that even with the cumulative projected volumes through the Town, noise levels will not be significantly different than they are today. The additional 220 trips added in both directions on Sir Francis Drake Boulevard during the peak hour would result in an increase of 1 decibel in the peak hour L_{eq}. Assuming that the volumes would be proportionately higher during the other hours, the L_{dn} would also increase about 1 decibel. A 1 decibel increase in traffic noise is not generally noticeable except in a laboratory situation.

Therefore, conditions along Sir Francis Drake Boulevard would not be expected to worsen with the possible following exception. As traffic volumes increase, people desiring to avoid congestion have to leave earlier in the morning or after the morning peak is over. This means that traffic noise levels could increase between the hour of 5 to 6 am. While this would not significantly change the value of the L_{dn}, it could result in more sleep disturbance through the Sir Francis Drake corridor.

Traffic volumes are not expected to increase significantly along the remaining streets in the Town of Ross; and assuming that mitigation measures are instituted to discourage diversions from Sir Francis Drake Boulevard during the morning commute, it is not anticipated that there will be any change in the noise

environment through the rest of the Town. Based on the traffic volumes projected, it is calculated that the L_{dn} will not exceed 60 dB anywhere in the remainder of Ross except in the front yards of homes along Lagunitas Road, Shady Lane, Poplar Avenue and Laurel Grove Avenue. When the distance to a backyard and the shielding provided by intervening homes are factored in, it is calculated that the L_{dn} in the rear yards of all homes in the Town (with the notable exception of those on Sir Francis Drake Boulevard) would be less than an L_{dn} of 55 dB.

The future noise exposure contours as required by Section 65302(f) of the California Government Code are included in this section of the General Plan. Only the contours along Sir Francis Drake Boulevard show up at the scale of this map. The 60, 65 and 70 L_{dn} contours are shown for Sir Francis Drake Boulevard in Figure 13.

A reasonable question is what can be done about traffic noise levels along Sir Francis Drake Boulevard. Given the need for driveway access to individual homes, there really is little that can be done. The continuous noise barriers commonly seen in other communities would probably be aesthetically unacceptable to the community and would not work due to the need to maintain driveway access. However, it is noticeable that several residents in the area have attempted to solve the noise problems on their individual lots by the construction of front yard fences. These fences, when properly located and constructed, can significantly reduce the noise exposure both in the front yard and in the first floor of homes facing Sir Francis Drake Boulevard. By working with neighbors along Sir Francis Drake Boulevard through this area, it would be possible to develop fence layouts for individual properties that could significantly improve the noise environment of these properties.

EXISTING TOWN NOISE CONTROLS

Traffic noise, the major noise source impacting the Town is controlled through state law. Vehicle noise limits are established by State law and are enforced by Town Police. The Highway Patrol has developed explicit procedures and training programs for enforcement of excessive vehicle noise. Proper mufflering can bring most motorcycles and almost all cars and trucks within State specified limits.

Currently, leafblower and other nuisance noise control problem control would fall under the Town Municipal Code §9.20.010, which prohibits loud or unnecessary noises as follows:

> No person shall make, cause, suffer or permit to be made or caused, upon any premises owned, occupied or controlled by such person, any unnecessary noises or sounds which are annoying to persons of ordinary sensitiveness, or which are so harsh or so prolonged, or unnatural, or unusual in their intensity, time or place of occurrence as to occasion discomfort to the inhabitants of this town or any number thereof.

The problem with enforcing this section is that finding a noise to be a violation requires that the enforcer find the complainant to be of ordinary sensitiveness and the noise to be harsh, prolonged, unnatural or unusual. These determinations require judgment on the part of the officer and are difficult to prove in court. The other sections of the Town's noise ordinance pertaining to specific noise sources also lack quantitative standards against which to assess violations.

The Town may also prosecute major noise problems under the "disturbing the peace" §415 of the State Penal Code which states: "Any person who maliciously and willfully disturbs another person by loud or unreasonable noise, or by tumultuous or offensive conduct . . . is guilty of a misdemeanor, and upon conviction by a court of competent jurisdiction shall be punished by fine not exceeding two hundred dollars, or by imprisonment in the county jail for not more than ninety days, or by both fine and imprisonment, or either, at the discretion of the court."

In either case, problems must be major and generally require several persons being severely disturbed for a court decision to be made in favor of a complainant. Simplified noise ordinance sections based on quantifiable limits, with fines levied for infractions, could provide a shortcut to resolving such conflicts. Such an ordinance could assist in making a determination whether the noise complaint is reasonable, and could limit excessively loud noises which occur during the day.

Generally, a noise ordinance should contain quantitative limits which set forth the allowable sound level that can be emitted within the zoning districts during various times of the day. The ordinance should contain not only absolute limits but also a method for evaluating the intensity of sound versus the length of time. In other words, the ordinance could allow higher noise levels for brief events and the limits could be lowered for noises that occurred for longer periods of time. The ordinance could also contain correction factors to account for the quality of the noise. Impulsive noises or noises with informational content (speech or music) have been found to be more annoying than continuous broad band noise of the same intensity.

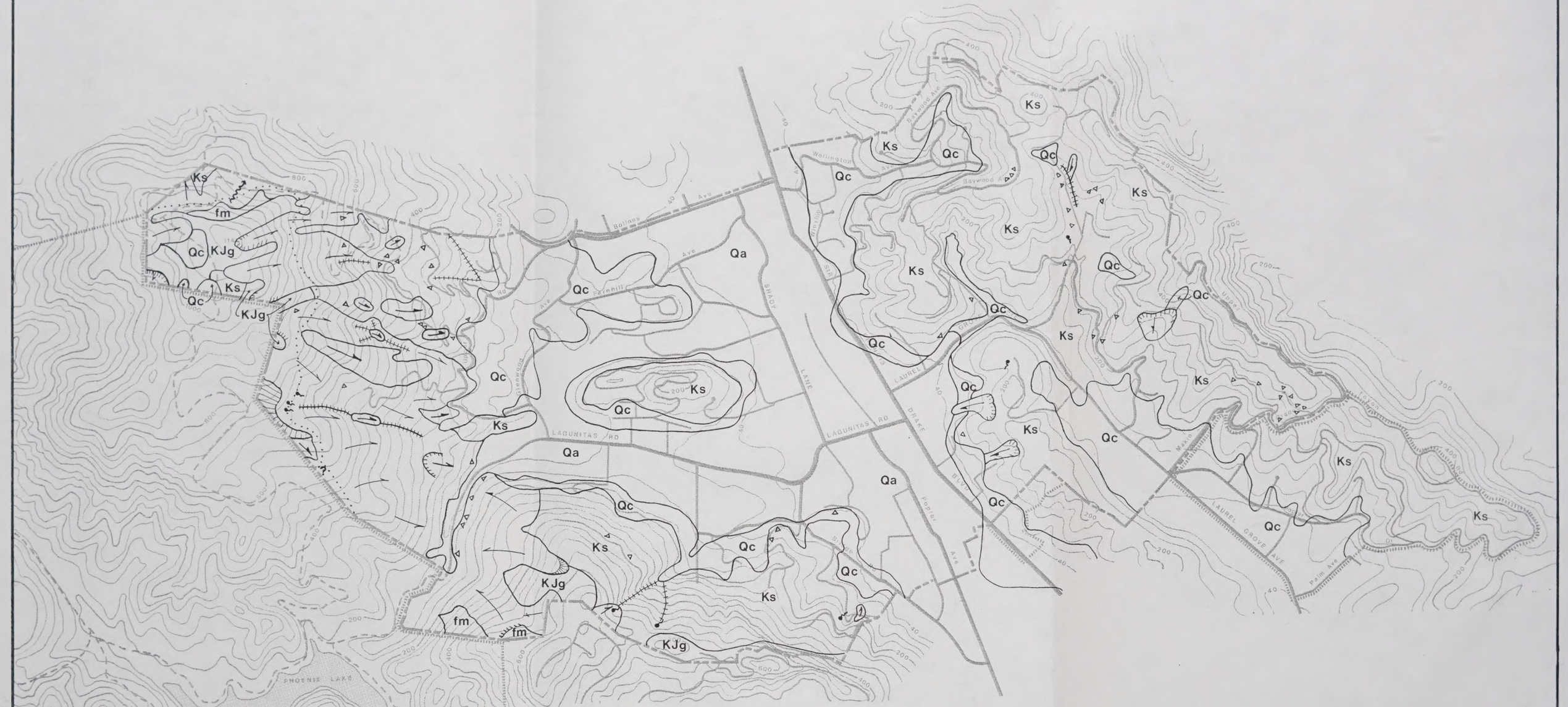
Notwithstanding these general quantitative limits, many noise ordinances contain additional sections dealing with specific noise sources. Leafblowers, for example, are often included in such a category. There are basically four approaches that can be used for the noise generated by specific equipment.

(1) Outright ban.

(2) Allowing only the use of equipment which meet strict sound level limits established by the Town.

(3) Allowing the use of the equipment only within a specific time period.

(4) A combination of noise emission limits and limits on hours of operation.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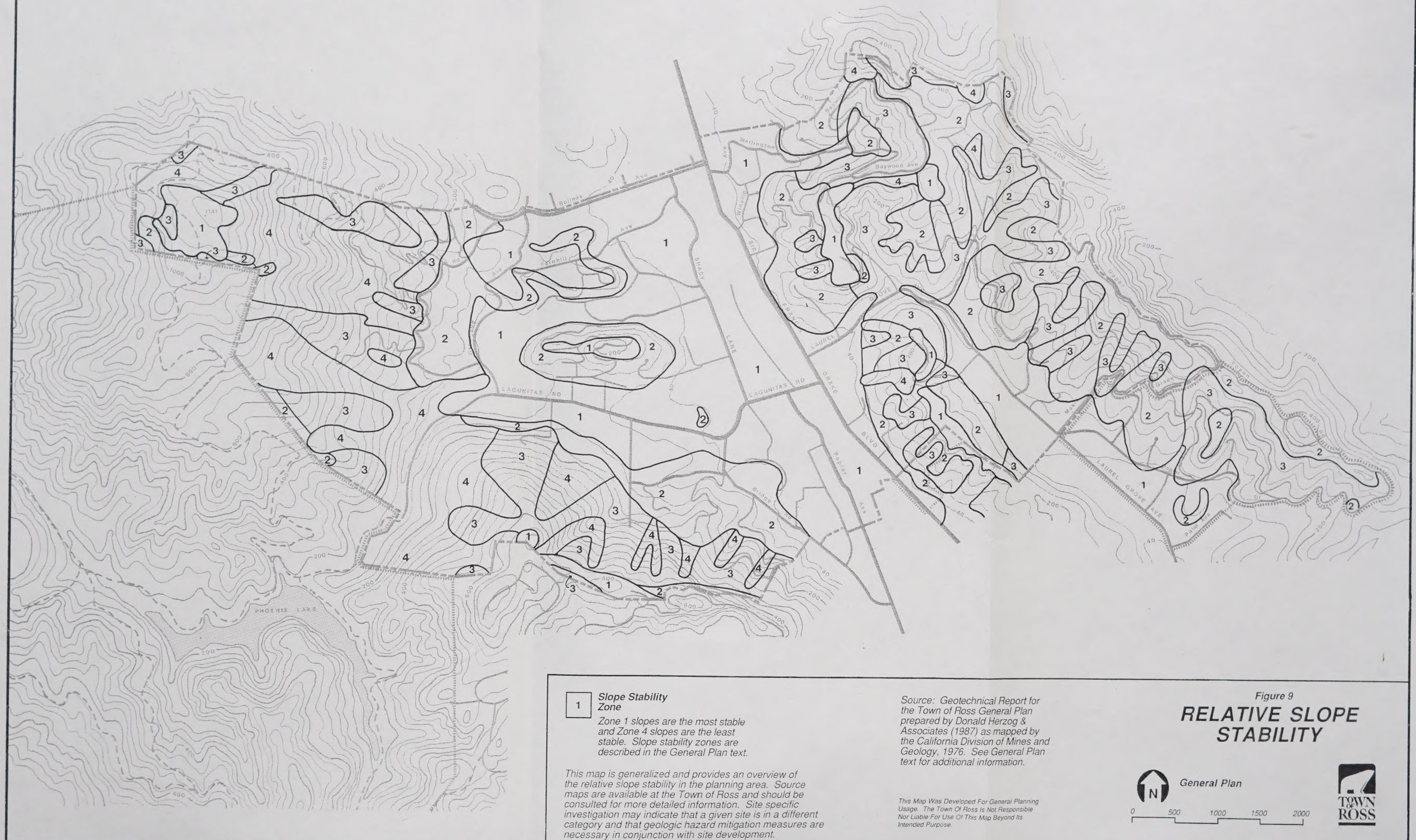

1 **Slope Stability Zone**

Zone 1 slopes are the most stable and Zone 4 slopes are the least stable. Slope stability zones are described in the General Plan text.

This map is generalized and provides an overview of the relative slope stability in the planning area. Source maps are available at the Town of Ross and should be consulted for more detailed information. Site specific investigation may indicate that a given site is in a different category and that geologic hazard mitigation measures are necessary in conjunction with site development.

Source: Geotechnical Report for the Town of Ross General Plan prepared by Donald Herzog & Associates (1987) as mapped by the California Division of Mines and Geology, 1976. See General Plan text for additional information.

This Map Was Developed For General Planning Usage. The Town Of Ross Is Not Responsible Nor Liable For Use Of This Map Beyond Its Intended Purpose.

Figure 9

RELATIVE SLOPE STABILITY

N *General Plan*

0 500 1000 1500 2000

TOWN OF ROSS

Areas of the 100-Year Flood*

Areas Between 100-Year and 500-Year Flood*

Previously Mapped Areas of Potential Dam Inundation**

Improvements to the spillway have reduced the dam inundation flood risk to 1 flood in 30,000 years. Revised maps based on improvements have not been prepared by the Marin Municipal Water District

**Source: Based upon the Flood Insurance Rate Maps for the National Flood Insurance Program as of 1981. This map will be revised upon completion of Town of Ross Flood Control Project.*

***Source: Marin Municipal Water District*

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Figure 10

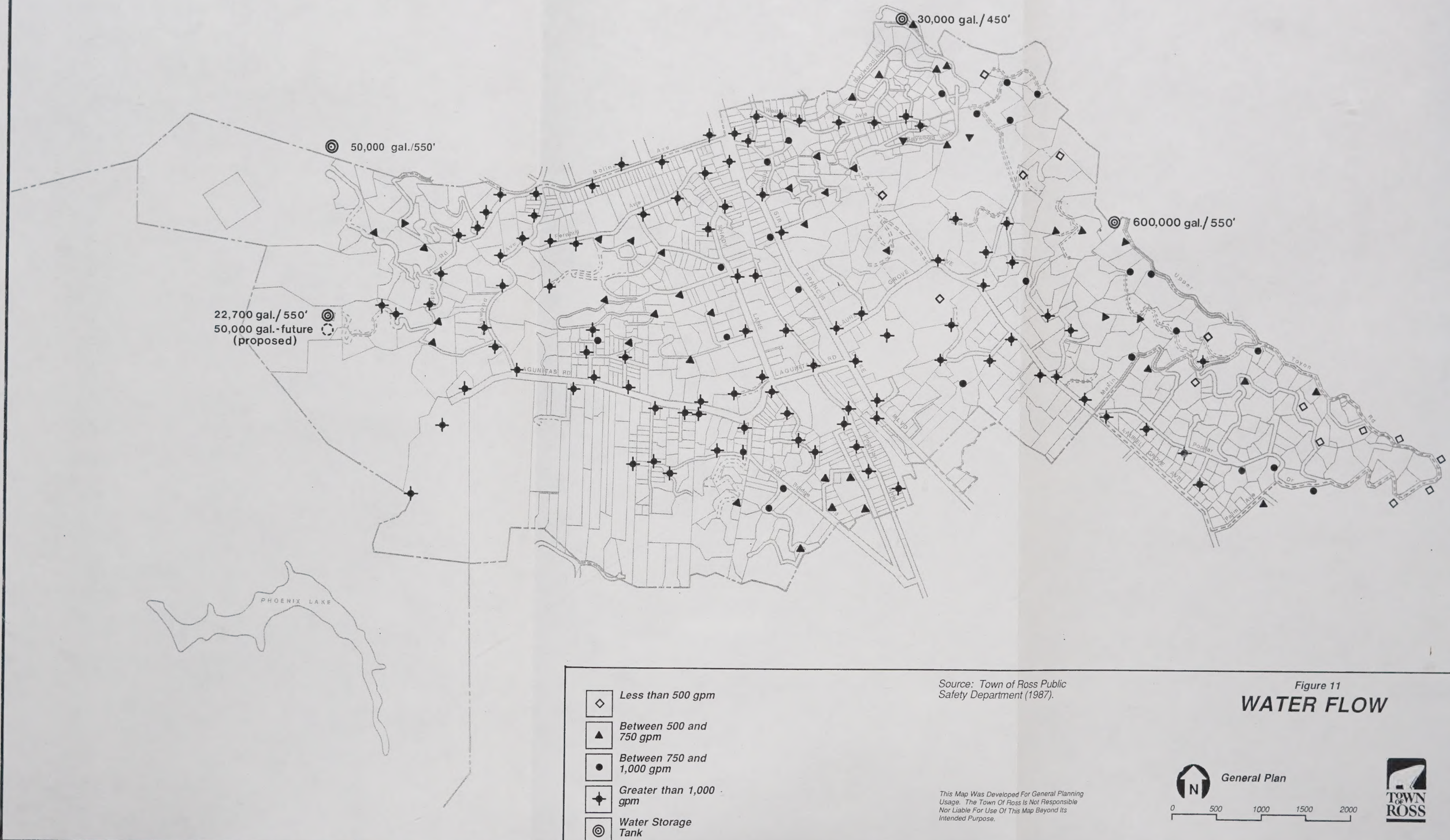
FLOOD HAZARD AREAS

N

General Plan

0 500 1000 1500 2000

TOWN OF ROSS



Source: Town of Ross Public Safety Department (1987).

Figure 11

WATER FLOW

This Map Was Developed For General Planning Usage. The Town Of Ross Is Not Responsible Nor Liable For Use Of This Map Beyond Its Intended Purpose.

General Plan

0 500 1000 1500 2000

TOWN OF ROSS

Possible Evacuation/ Access Routes

Possible Emergency Housing Areas

Walkways

Triage (Medical) and Staging (Command) Areas

Bridges that May be Down in an Emergency

Source: Town of Ross Public Safety Department.

This Map Was Developed For General Planning Usage. The Town Of Ross Is Not Responsible Nor Liable For Use Of This Map Beyond Its Intended Purpose.

Figure 12

POSSIBLE EMERGENCY EVACUATION ROUTES

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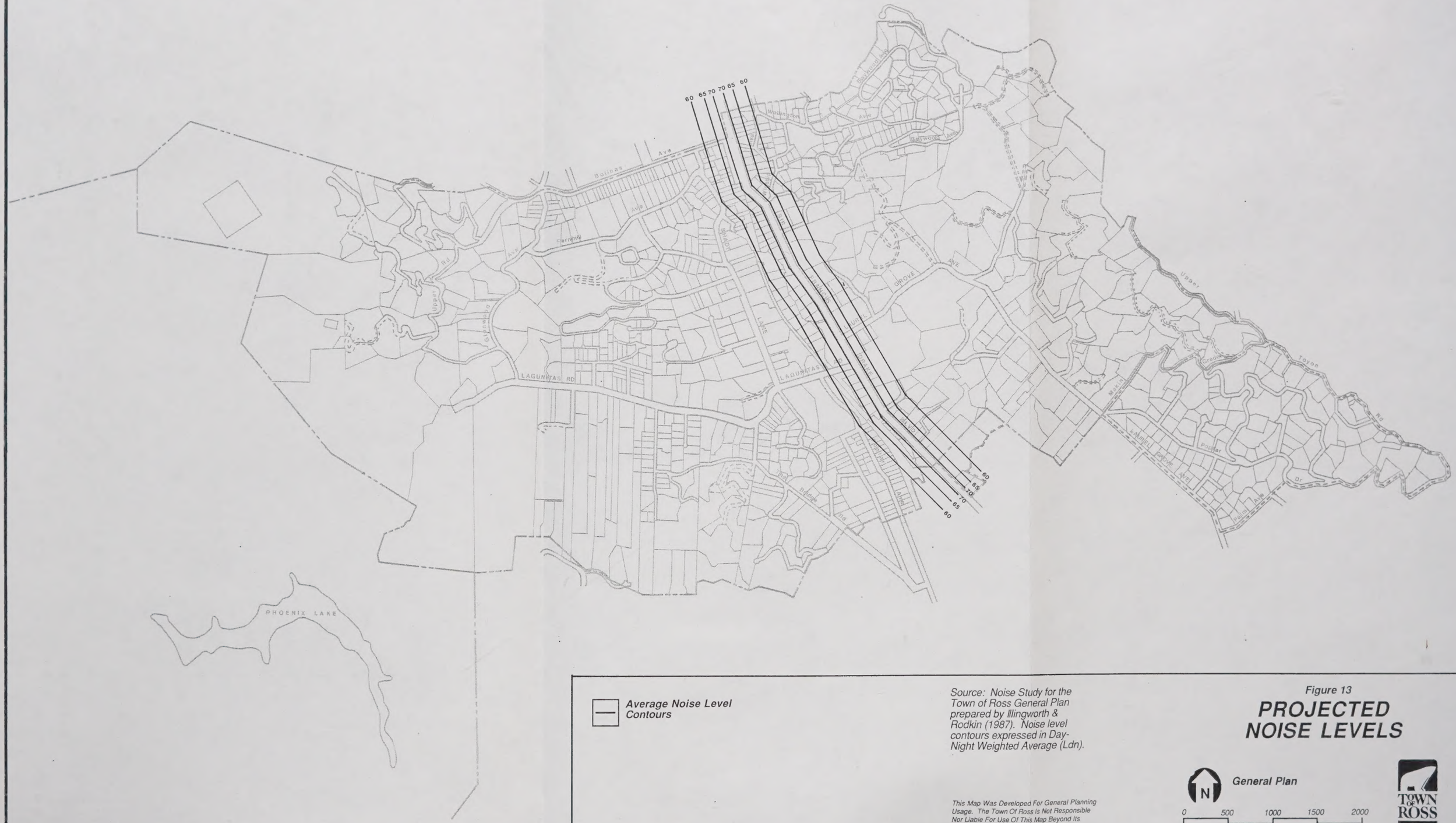
General Plan

0 500 1000 1500 2000

TOWN OF ROSS



Average Noise Level Contours

Source: Noise Study for the Town of Ross General Plan prepared by Illingworth & Rodkin (1987). Noise level contours expressed in Day-Night Weighted Average (Ldn).

This Map Was Developed For General Planning Usage. The Town Of Ross Is Not Responsible Nor Liable For Use Of This Map Beyond Its Intended Purpose.

Figure 13

PROJECTED NOISE LEVELS

N

General Plan

0 500 1000 1500 2000

TOWN OF ROSS

APPENDIX A
Resolution Adopting the General Plan

ROSS TOWN COUNCIL

RESOLUTION NO. 1223

RESOLUTION OF THE ROSS TOWN COUNCIL ADOPTING
THE TOWN OF ROSS GENERAL PLAN

WHEREAS, in the fall of 1986 the Town Council of the Town of Ross initiated a process for preparing and adopting an updated comprehensive, long-term general plan for the physical development of the town and planning area pursuant to Government Code Section 65300 et. seq.; and,

WHEREAS, the Ross Town Council authorized the preparation of work program for updating the Town's General Plan, created a "Blue Ribbon" Citizen Committee and budgeted funds to update the general plan; and,

WHEREAS, the Citizen Committee has reviewed and considered professional analysis and documents relevant to the preparation of the updated Town of Ross General Plan, including:

1. Community Workshop Reports (December, 1986 and February, 1988);
2. Town of Ross General Plan Traffic Study (May, 1987);
3. Geotechnical Report for the Town of Ross (November, 1987);
4. Information for the Noise Element of the General Plan (May, 1987);
5. Preliminary Natural Environment Background Report (February, 1987);
6. Preliminary Health and Safety Background Report (April, 1987);
7. Preliminary Community Development Background Report (May, 1987); and,

WHEREAS, full public involvement in the preparation of the updated Town of Ross General Plan has been ensured through duly noticed public workshops and public hearings and other means, including the following:

1. Development of a General Plan Mailing List with local groups, public agencies, non-profit agencies and individuals who received newsletters and notices of all workshops, public hearings and the availability of documents;
2. Two community workshops were held (November, 1986 and January, 1988), with notices for the worksops sent to all property owners and others on the General Plan Mailing List;
3. Questionnaires for community comments on general plan issues were provided at each workshop and responses reviewed;
4. Three newsletters were sent to all property owners and others on the General Plan Mailing List;
5. Copies of the complete Draft Town of Ross General Plan were made available at the following locations: Ross Town Hall; Marin County Civic Center Library; Corte Madera Library; San Anselmo Library; and San Rafael Library; and,

WHEREAS, the Ross Town Council held 2 duly noticed public hearings on March 10, 1988 and March 24, 1988 to consider the updated Town of Ross General Plan; and,

WHEREAS, the Ross Town Council finds that the updated Town of Ross General Plan Goals, Policies, Standards and Recommendations are internally consistent; and,

WHEREAS, the Ross Town Council finds that the goals of the Plan to preserve and enhance the predominantly residential character of the community are appropriate given existing development patterns, traffic congestion, and environmental characteristics; and,

WHEREAS, the updated Town of Ross General Plan reflects a high degree of community concern regarding future development and conservation of the Ross Planning Area; and,

WHEREAS, the Ross Town Council finds that the updated Town of Ross General Plan will not result in any significant negative environmental impacts and a Negative Declaration is hereby approved.

NOW, THEREFORE, BE IT RESOLVED that the Town Council of the Town of Ross does hereby adopt the updated Town of Ross General Plan, included as Attachment A to this resolution, and summarized as follows:

Plan Organization:

The plan covers the topics of land use, circulation, housing, open space, conservation, safety and noise. The area covered by the plan is located in the highly developed city center corridor of Marin County, and includes the incorporated Town of Ross and its sphere of influence. The area is bordered by the Town of San Anselmo, City of San Rafael and the Kentfield/Greenbrae planning area.

Major Policy Features of the Plan:

(1) **Overall Community Character.** The residents of Ross like the small town, community feel and character of the Town. Special assets identified include open and tree-covered hills, low density of development, architectural scale and quality, Ross Common and downtown. From a land use standpoint, the intent of the updated General Plan is to retain these qualities and the existing pattern and scale of development reflective of the fact that there is little vacant land remaining in the Town.

(2) **Protection of the Natural Environment.** Protection of the natural environment continues to be a major focus of the General Plan. Lands of open space value are encouraged to be preserved. Policies are intended to assure that environmental features are preserved and enhanced.

(3) **Concern for Public Health and Safety.** The Plan identifies various health and safety hazards which must be considered in planning the location, design and intensity of development in a given area. Policies address geologic and seismic risk, flooding, hazardous materials, disaster preparedness, fire and crime prevention. Specific noise standards for indoor and outdoor noise are also included to provide a clear basis for evaluating noise impacts and establishing appropriate noise mitigation design. The plan also calls for

consideration of establishing quantifiable noise standards in the Town's Noise Ordinance.

(4) **Transportation Needs.** Maintaining acceptable traffic operations is a primary concern of the Plan. The Plan establishes level of service standards for traffic operations on local streets and evaluates conditions on Sir Francis Drake Boulevard. A primary goal of the plan is not to widen Sir Francis Drake Boulevard, since this would considerably alter the character of the Town. Other possible improvements are evaluated and proposed for consideration as part of the plan.

(5) **Land Use Plan.** The Land Use Plan identifies five residential density ranges, consistent with existing development patterns in the Town. The lowest density range (.1 to 1 unit per acre) is proposed primarily in hillside areas and acknowledges the existence of environmentally sensitive conditions such as steep slopes, important site features, geologic constraints, narrow roads, limited access, fire and other safety concerns, the visual significance of the property, existing development patterns, etc. Other density ranges are based on existing densities in the Town. The medium high density category is consistent with prevailing densities. This area is located along Bolinas Avenue. The General Plan also proposes a new residential higher density category (15 to 20 units per acre) to be applied to the Ross General Hospital site. Non-residential land use categories include public park and open space, public service, local service commercial, limited quasi-public/private service and limited specialized recreation/cultural. The land use designations will be implemented through the Zoning Ordinance.

(6) **Approach to Architectural Design and Scale of Development.** The General Plan provides overview policies concerning architectural design and density. The design policies are consistent with existing requirements in the Zoning Ordinance and help support the community's desire for high-quality design consistent with community appearance and overall low-density.

(7) **Ross's Planning Area and Sphere of Influence (SOI).** The General Plan designates the planning area as having a direct physical and social influence on the Town's planning. Annexation policies establish criteria for considering possible future annexation of land within the planning area.

(8) **Housing Policies and Programs.** The Plan establishes goals and policies intended to try to meet the Town's housing needs. However, the plan also recognizes that there is limited land and resources for meeting those needs. A key aspect of the plan is the identification of the existing Ross General Hospital site for higher density residential use.

(9) **Implementing Actions.** Specific actions intended to help achieve plan goals and policies are identified. These range from consideration of rezoning small areas consistent with land use densities to consideration of revisions to the Town's Noise Ordinance to provide quantifiable standards for enforcement. All

of the implementing actions will be subject to public review and evaluation before they are implemented.

PASSED AND ADOPTED by the Ross Town Council, County of Marin, State of California, on the 24th day of March, 1988, by the following vote, to-wit:

AYES: COUNCILMEMBERS DIRKES, POORE, JULIEN AND BREKHUS

NOES: NONE

ABSENT: MAYOR FLEMMING

Anne F Flemming
Mayor, Town of Ross

ATTEST:

Virginia Stoll
Town Clerk

APPENDIX B
Community Workshops Report

ROSS GENERAL PLAN UPDATE

COMMUNITY WORKSHOPS REPORT

A Summary of the Results of Two Workshops Held on December 8, 1986, and February 3, 1988, Conducted As Part of the Ross General Plan Update Process

Town of Ross Staff: Jeffery Baird, *General Plan Update Project Manager*
Therese Brekke, *Assistant Planner*
Rabi Elias, *Director of Planning and Public Works, Building Official*

Workshop Staff: Daniel Iacofano, Moore Iacofano Goltsman
Louis Hexter, MIG

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(December 8, 1986)

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II. Workshop Process 1

III. Assets Summary Analysis 1

IV. Summary of Major Planning Issues
Identified By Workshop Participants 5

A. Land Use
B. Circulation
C. Housing
D. Safety
E. Noise
F. Open Space
G. Conservation

2. **COMMUNITY WORKSHOP #2 — *Review of Draft General Plan***
(February 3, 1988)

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A. Community Development
B. Natural Environment
C. Health and Safety

APPENDICES 16

1. COMMUNITY WORKSHOP #1 - *Issues Identification* *(December 8, 1986)*

I. INTRODUCTION

The purpose of the Ross General Plan Community Workshop was to involve residents of Ross in the identification and discussion of major community planning issues that should be addressed in the General Plan update process.

The workshop was held at the Ross Town Hall on Monday evening, December 8, and a group of approximately 40 community members attended.

II. WORKSHOP PROCESS

Jeffery Baird, Project Manager for the Ross General Plan Update process, gave a brief overview to the General Plan Revision process, aided by a wall-size flow chart.

The group of participants was then asked to write down on a sheet of paper their own perceptions of Ross's assets (i.e., its strengths). These personal views were then voiced to the group and recorded on a large wall graphic (see Appendix B). From this exercise, participants obtained a sense of what was positive about Ross -- things that should be supported, promoted and replicated.

The group was then given several minutes to write out their views of the most important planning issues to be considered during the update process. These issues were grouped according to General Plan category:

- **Community Development** -- land use, circulation and housing;
- **Health and Safety** -- safety and noise; and
- **Natural Environment**, including open space and conservation.

Community members discussed existing conditions in all these areas and identified possibilities for future improvements. Comments from this discussion were also recorded on a large wall graphic (see Appendix C).

The next sections summarize the assets and major planning issues identified by workshop participants.

III. ASSETS SUMMARY ANALYSIS

To begin the workshop discussion, all participants were asked to record their responses to the following question:

What do you consider to be the major assets of the Town of Ross?

A total of 34 response sheets were collected (see Appendix A for sample comment form). The information contained on these sheets was content analyzed and categorized according to major topics based on the frequency by which individual items were mentioned. The results are summarized below. Only those categories with 10 or more mentions are shown. A condensation of typical comments is provided under each major topic heading. The number in parentheses represents the number of mentions for each particular response. Photoreductions of the wall graphics produced during the discussion of this topic appear in Appendix B.

ASSETS OF ROSS	*# OF MENTIONS*	*% OF ALL ITEMS MENTIONED*	*% OF TOTAL RESPONDENTS*
SMALL TOWN QUALITIES	**55**	**22%**	**79%**
Rural character (9)			
Small size (8)			
Small town flavor (6)			
Quiet (6)			
Development controls (6)			
Privacy (5)			
Safety/Security (4)			
Lack of traffic intensity (3)			
NATURAL BEAUTY	**52**	**20%**	**82%**
Trees (11)			
Open space (7)			
Weather (6)			
Natural beauty (5)			
Large lots (5)			
Natural stream (3)			
Rural setting (2)			
Mt. Tamalpais (2)			

ASSETS OF ROSS	*# OF MENTIONS*	*% OF ALL ITEMS MENTIONED*	*% OF TOTAL RESPONDENTS*
COMMUNITY SERVICES	**40**	**16%**	**65%**
School system quality (14)			
Good police and fire services (9)			
Town tennis courts (3)			
Recreational resources (2)			
Exceptional parks (2)			
Two good churches -- St. John's and St. Anselm's (2)			
Bike path (2)			
Good health services (2)			
SPECIAL PLACES	**32**	**13%**	**50%**
Ross School and playgrounds (7)			
Post office as central meeting place (5)			
Ross Common (5)			
A sense of history (3)			
Attractive Homes (2)			
Unique, diverse architecture (2)			
Central location of churches (2)			
Marin Art & Garden Center (2)			
PEOPLE	**23**	**9%**	**53%**
Sense of community (7)			
Concerned, active citizens (3)			
Nice people (3)			
Citizens devoted to the preservation of things important to community (2)			
Neighborliness (2)			

ASSETS OF ROSS	*# OF MENTIONS*	*% OF ALL ITEMS MENTIONED*	*% OF TOTAL RESPONDENTS*
LOCATION	**20**	**8%**	**35%**
Proximity to San Francisco (4)			
Readily accessible to larger urban areas (3)			
Central location within the County (3)			
Proximity to open space (3)			
Proximity to rural areas (2)			
GOVERNMENT	**12**	**5%**	**29%**
Accessibility of community government (4)			
Small, dedicated council (2)			
Town council's dedication to preserve ambience (2)			
Self-contained government (2)			
COMMERCIAL SERVICES	**10**	**4%**	**24%**
Small, restricted, contained commercial area (7)			
Pleasant shops			
Good restaurants			
Charm of the downtown commercial area			
MISCELLANEOUS	**11**	**4%**	**24%**
Freedom to have pets			
Lack of uniformity in building construction			
A nice place to live			

IV. SUMMARY OF MAJOR PLANNING ISSUES IDENTIFIED BY WORKSHOP PARTICIPANTS

Following the discussion on community assets, workshop participants were then asked to identify some of the major planning issues facing the City of Ross in each of the following categories: (A) land use; (B) circulation; (C) housing; (D) safety; (E) noise; (F) open space; and (G) conservation. In addition, groups were asked to identify any other issue topics which they felt should be addressed in the General Plan revision. Brief summaries of the discussion in each category follow. The wall graphics which were produced during the discussion of issues are provided in Appendix C.

A. LAND USE

The main themes with respect to land use in Ross included maintaining the small town character identified as a major asset in the previous discussion by retaining low-density, single-family housing. Participants were concerned that the large parcels of land in the town not be subdivided without careful analysis.

In a related issue, participants also wanted to ensure that the downtown commercial area would be kept "small and charming," and that development would be regulated. More detailed comments are provided below.

1. Zoning

- Existing single-family residential zoning should be maintained.
- Setback requirements should be enforced.
- Existing lot size restrictions should be maintained.
- Existing open space should be preserved.

2. Growth Control

- Small town character should be preserved.
- Overdevelopment should not be allowed.
- Small, charming character of downtown commercial area should be preserved
- No urban type, high-rise buildings should be allowed.

3. Annexation/Sphere of Influence

- Ross's "sphere of influence" includes Ross Hospital, Del Mesa, Bald Hill, Phoenix Lake.
- Annexation of Ross Hospital and/or Del Mesa should be considered.
- Development of Bald Hill should be debated.

4. Recreational Facilities

- Existing park lands and open spaces should be preserved.
- More recreational facilities and activities should be provided.

B. CIRCULATION

Much of the discussion on circulation centered on the three main thoroughfares in Ross -- Sir Francis Drake Boulevard, Shady Lane and Lagunitas Road. Traffic volume on these streets led to concerns for pedestrian and bicyclist safety. While some participants favored widening Sir Francis Drake to ease congestion, most urged that the boulevard be maintained as a two-lane street.

Most of the issues dealt with local circulation; only a few comments were made with respect to public transportation within Marin County and beyond. Further comments are outlined below.

1. Automobile Traffic

- Traffic flow needs to be improved.
- Sir Francis Drake services too much of Marin County.
- Sir Francis Drake should not be widened to four lanes.
- Better public transportation is needed along Sir Francis Drake Boulevard.
- Traffic on Shady Lane should be restricted.
- Congestion on Lagunitas Road during evenings and weekends needs to be eased.

2. *Parking*

- Parking should be allowed in Natalie Green Park so Lagunitas Road doesn't get so congested.
- A fee should be charged for parking at Phoenix Lake.
- Parking should be provided for commuters taking the bus into the city.

3. *Road Improvements*

- Some road improvements (e.g., Shady Lane) are needed.
- Restricted speed limits should be instituted.
- Signals are needed along Sir Francis Drake Blvd.

4. *Public Transportation*

- Mass transit within the County and to San Francisco should be maintained and encouraged.
- Carpooling for commuters should be promoted.

5. *Pedestrian Circulation*

- Safe, "walkable" character of Ross should be preserved.
- Shady Lane should have a sidewalk and bike path on one side of the street.

6. *Bicycle Circulation*

- Bicycle path system throughout the Town should be expanded and improved.
- Bicycle path adjacent to Shady Lane is needed.
- Single-file bicycle rule should be enforced.

7. *Emergency Access*

- Adequate public safety and emergency access should be ensured.

C. HOUSING

The central issue with respect to housing in Ross was affordability. Participants were largely in favor of providing a wider diversity of housing in the community, though there was no consensus on how this could be achieved. One alternative widely mentioned was the provision for second units on existing properties -- described as "au pair" cottages, "in-law" apartments, etc.

Workshop participants also felt strongly that housing for all age groups should be offered, noting that providing for a greater age range of citizens enhances the quality of life in the community. There was concern that the current cost of housing in Ross precludes the presence of younger families and school-age youth. More detailed comments are provided below.

1. Affordable Housing

- The Town lacks "entry level" homes for young families.
- The use of second units to satisfy low- and moderate-income housing requirements should be analyzed.
- The upscaling of existing homes creates a community of wealthy people and a lack of age and ethnic balance.
- Low-cost housing is already being provided by all the au pairs, maids and students renting rooms in large houses.

2. Zoning and Growth

- An annual maximum for new housing starts should be established.
- Current variance approval procedures should be maintained.
- Current zoning ordinance should be reviewed.
- Planning Commission should be established to aid Town Council with variance procedures.
- Design Review Board should be established to maintain standards of quality.
- Removal of large trees to accommodate development should be regulated.

3. Multiple-Unit Housing

- Multiple units should not be allowed.
- Multiple units should be provided.
- Apartments and condominiums should be provided in the downtown area and near Ross Hospital.

D. SAFETY

The greatest concerns for safety of Ross residents were flooding, landslides and traffic. There was wide support for some form of flood control plan, including provision for drainage changes due to new development on hillsides.

The issue of pedestrian and bicyclist safety due to automobile traffic was reiterated here, and additional path systems were requested.

Participants were quite satisfied with the level of police, fire and health protection provided by the Town, encouraging that these services be maintained and that emergency access be ensured. More detailed comments are provided below.

1. Emergency Planning

- Flood control plan is needed, including the maintenance of culverts by property owners, and provision for hillside drainage changes caused by new development.
- Citizens should be involved in the development of the Town's emergency preparedness plan.
- Earthquake plan is also needed.

2. Traffic Safety

- The heavy automobile use of Sir Francis Drake and neighborhood streets poses hazards to pedestrians and bicyclists.
- Pedestrian walkways should be provided.
- Bicycle paths should be provided.

3. Police/Fire/Health Protection

- Police, fire and emergency medical services are adequate and should be maintained.
- Ross's own Public Safety Department should be maintained.
- Accessibility of hillside lots for fire protection should be ensured.
- Police patrols should be maintained especially near homes with single occupants.

4. Animal Control

- A dog leash and pooper-scooper laws are needed.
- Rat control is needed.
- Excess deer population should be controlled to prevent denuding of hills and erosion.

5. Miscellaneous

- Garbage should be picked up more regularly at Natalie Green Park.
- Poison oak needs to be removed.

E. NOISE

The major issue with respect to noise in Ross concerns the use of power equipment for blowing leaves, mowing lawns and constructing buildings. About half of those mentioning this problem called for an all-out ban on power blowers, while others said their use should be restricted by some town ordinance.

Other sources of noise mentioned were traffic from Sir Francis Drake Boulevard, including and especially noisy motorcycles, events at the Marin Art and Garden Center; and barking dogs. More detailed comments follow.

1. Power Tools

- Power blowers should be regulated in the hours of their use, if permitted at all.
- Other power equipment, such as lawn mowers and construction equipment, should be regulated as to the time of their use.

2. Traffic

- Increased traffic on Sir Francis Drake Blvd. has increased noise levels.
- The placement of fences along Sir Francis Drake Blvd. should be encouraged.
- Noisy motorcycles and cars should be ticketed.

3. Noise Ordinance

- Current noise ordinance may be too vague; a model ordinance should be developed.
- Hillside and valleys require greater noise reduction measures than flat areas.

4. Miscellaneous

- Barking dogs should be controlled.
- Amplification of music at Marin Art and Garden Center functions is disturbing to neighbors.

F. OPEN SPACE

Workshop participants cited the amount and quality of open space in and around Ross as among its greatest assets. In identifying major issues with respect to open space, there was overwhelming consensus that it should be maintained and protected. Among the more controversial areas discussed was Bald Hill and the potential for development there.

Participants also were concerned about the use of open spaces such as Green Park by non-residents and the traffic and parking needs generated by such use. More comments are shown below.

1. Planning and Zoning

- Existing parks and open space should be preserved.
- Town Council should be more aware of variances and their implications on open space.
- Development of Bald Hill is an issue to be discussed.
- Ross Common should be preserved.
- Special places include Bald Hill, Ross Common and Phoenix Lake.

2. Access

- A balance between use by residents and non-residents should be established.
- User fees for Natalie Green Park should be established, with an annual waiver for residents.
- Parking and automobile access in Natalie Green Park needs to be regulated.

3. Maintenance and Upgrading

- Green Park needs upgrading.
- Stream should be cleaned out to enlarge drainage capacity.
- Maintenance of open space is important.
- Insect and weed control funds and efforts should be increased.

G. CONSERVATION

Concern for the preservation and replenishing of Ross's tree population was the major issue in regard to conservation. Workshop participants felt that the natural environment gives Ross a unique character which deserves protection. More comments are listed below.

1. Trees

- As many trees as possible should be preserved.
- "Landmark groves" should be conserved.
- A tree re-planting program should be established.
- Elm tree disease needs to be controlled.

2. Stream

- Stream should be kept open and natural.
- Some method for retaining flow throughout the year should be found.
- The stream should be stocked for fishing.

3. Planning

- Conservation restrictions should be kept at a maximum.
- Park-like, sylvan atmosphere should be retained.
- Existing open space should be preserved.

4. Miscellaneous

- A good, safe flood plan should be developed.
- A method for controlling the deer population should be found.

H. OTHER

Some additional comments were made by workshop participants regarding a variety of issues. The most significant of these was the sense that an annual Town meeting would be beneficial to address community concerns. The need was also expressed in different ways for a fiscal plan for the Town.

2. COMMUNITY WORKSHOP #2 — *Review of Draft General Plan*

I. INTRODUCTION

The purpose of this Community Workshop was to solicit and respond to comments regarding the Draft General Plan, and to familiarize town residents with the structure of the document and the planning process.

The workshop was held at the Ross Elementary School's Multi-Purpose Room on Wednesday evening, February 3, and a group of approximately 25 community members attended.

II. WORKSHOP PROCESS

George Dirkes, of the Ross Town Council, welcomed community members to the workshop and introduced Jeffery Baird, Project Manager of the Ross General Plan Update. Following an overview of the General Plan document structure and of the planning process, participants were invited to make comments regarding the content of the General Plan, either verbally or in writing by completing a short- or long-form comment sheet provided by the planning team. Participants were also encouraged to take additional long forms to family and friends. The comments offered by those in attendance are summarized below.

III. SUMMARY OF WORKSHOP PARTICIPANTS' COMMENTS REGARDING DRAFT GENERAL PLAN

Workshop participants were asked for their questions and comments in each of the three main General Plan sections: Community Development, Natural Environment and Health and Safety. The code in the left margin before each comment or question refers to the goal or policy in the General Plan document. Participants' quotes are shown in ***bold italic***; responses by the planning team are indicated in normal type.

A. COMMUNITY DEVELOPMENT

LU-3 ***How much of hillside remains to be annexed?***
San Rafael boundary down middle of upper Toyon Drive. Plan will clear up "address confusion."

LU-2 ***Why did you not consider detachment rather than annexation?***
Include this as an option.
Status quo as an option.
Town control of site as an entryway.
Currently in two jurisdictions — 2 acres in Ross, 5 acres in Kentfield & County
Mandate for affordable housing.
Provide housing for the elderly
Provide for higher density

H-14 ***What does "appropriate location" for second units mean?***
Town has ordinance (more stringent than the State) for:

- Setbacks
- Square footage
- Cannot be detached
- Must have owner/occupant in the main house

Why "encourage" 2nd units?
Use language such as "allow."
Use language structured to prevent "red flag."

How many 2nd units approved?

LU-B ***How is "high design" defined?***
Develop a list of design criteria/policies
Recommendation in Plan to establish Design Review Guidelines; issues to consider include: flexibility; government control; subjectivity of design. Don't want standardization.

H-7 ***Why not classify this site as lower density?***
(Change "high density" to "higher density")
(pp.36,37) Examine benchmarks/baseline for traffic.
Final density to be established after further study.
As stated in plan, any development cannot adversely impact traffic.

C-2c ***Laurel grove should be added . . .***

B. NATURAL ENVIRONMENT

NE-A ***Should read "Bald Hill"***

NE-13 ***Should read "Bald Hill"***

NE-B ***Delete "must be considered"***

Any reference to "protection of views?"
(See ***LU-7*** & ***LU-8*** "Excellence of Design" with respect to trees and vegetation; see Tiburon, Belvedere, Oakland)

- Case law on rights to light, air

Is this a Council issue or a legal issue?
Best to keep Council out

C. HEALTH AND SAFETY

Get rid of leaf blowers!

HS-12 Coordination with governmental agencies (The Tanner Act)
Emergency access took away parking; is there a way to resolve parking difficulties?

- Discussion of parking along Lagunitas Road to Glenwood should be referenced in document.

Has there been a parking study done around the Post Office?

- Has not been studied; perhaps in the future.

APPENDICES

A. Assets Comment Form (Community Workshop #1)

B. Wall Graphic Prepared During Workshop Discussion on Community Assets (Community Workshop #1)

C. Wall Graphic Prepared During Workshop Discussion on Major Planning Issues (Community Workshop #1)

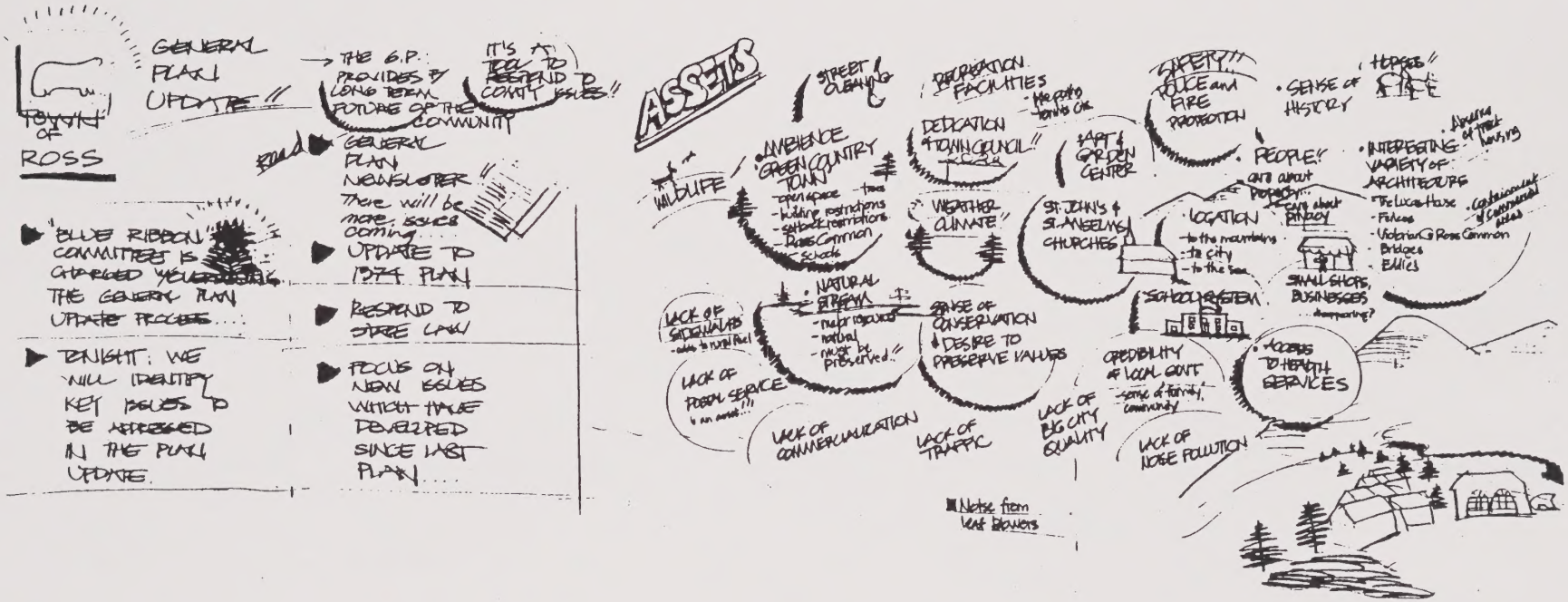
TOWN OF ROSS

GENERAL PLAN UPDATE
COMMUNITY WORKSHOP
Monday, December 8, 1986
7:30 PM - 10:00 PM
Ross Town Council Chambers

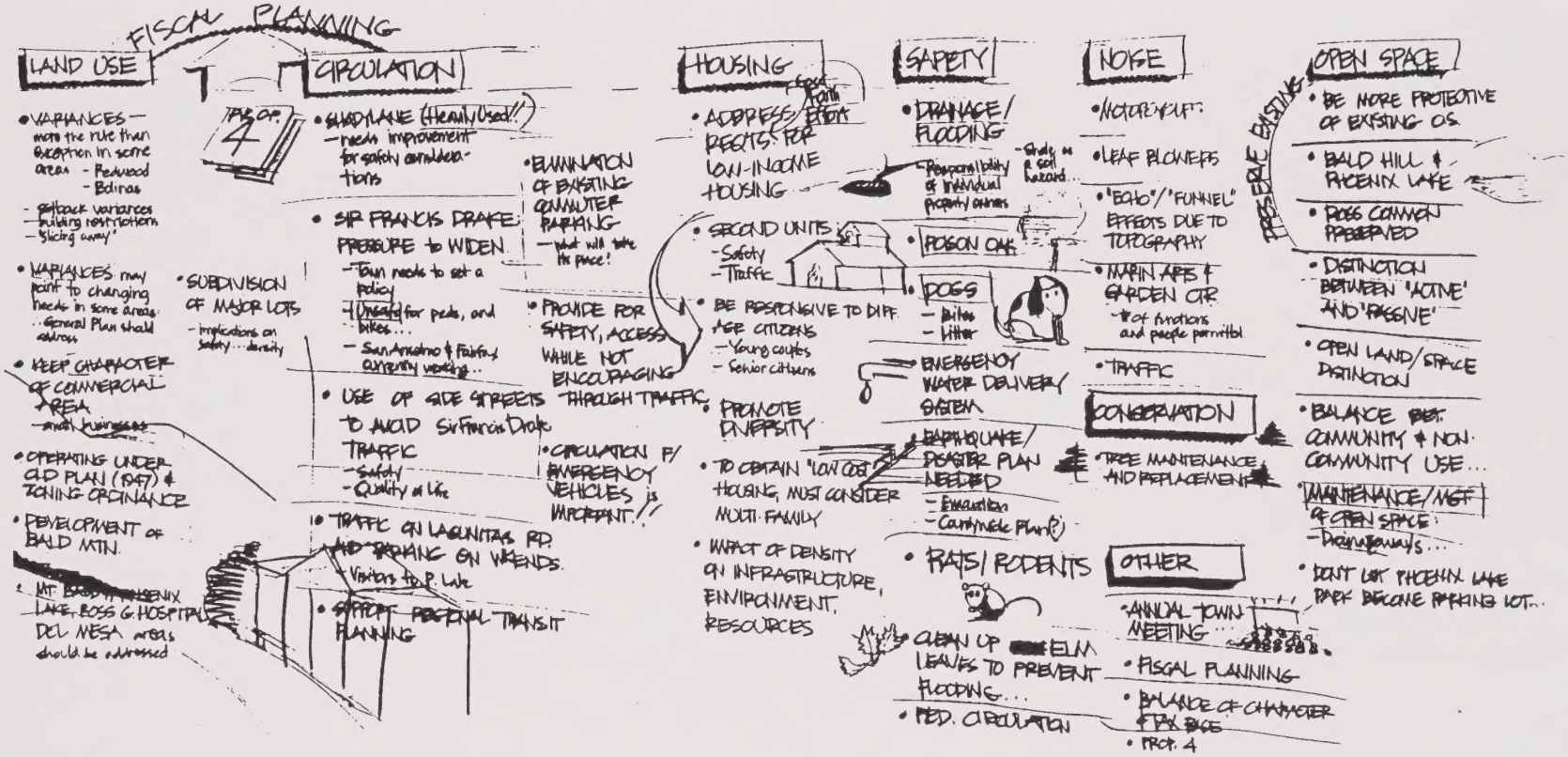
ASSETS OF ROSS

What do you consider to be the major assets of the Town of Ross?

Appendix A: ASSETS COMMENT FORM



Appendix B: ASSETS OF THE TOWN OF ROSS



Appendix C: MAJOR PLANNING ISSUES

U.C. BERKELEY LIBRARIES
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